

BEFORE THE INTERNATIONAL CENTRE FOR THE SETTLEMENT OF
INVESTMENT DISPUTES

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 In the Matter of Arbitration :
 Between: :
 :
 DAVID AVEN, et al., :
 : UNCITRAL Case No.
 Claimants, : UNCT/15/3
 :
 and :
 :
 THE REPUBLIC OF COSTA RICA, :
 :
 Respondent. :

----- x Volume 6

HEARING ON JURISDICTION AND MERITS

December 12, 2016

The World Bank
700 18th Street, N.W.
J Building
Conference Room JB 1-080
Washington, D.C.

The hearing in the above-entitled matter came on,
pursuant to notice, at 8:12 a.m., before:

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MR. C. MARK BAKER, Co-Arbitrator

PROF. PEDRO NIKKEN, Co-Arbitrator

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Secretary to the Tribunal

MS. SUSANNE SCHWALB
Assistant to the Tribunal

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P R O C E E D I N G S

1

PRESIDENT SIQUEIROS: Are we ready to proceed?

2

3

MR. BURN: Yes, sir.

4

5

PRESIDENT SIQUEIROS: Okay. Well, good morning to all. This is the sixth day of the hearing in the case brought by Mr. David R. Aven, et al., against the Republic of Costa Rica.

6

7

8

And we may proceed on a still chilly Monday, December 12th, 2016, day, unless there are any procedural issues that the parties may wish to address before we commence the hearing. I understand there are.

10

11

12

13

MR. BURN: There is just one, sir. Yesterday we submitted to the Respondent some additional documents that we wish to put onto the record. There are slightly different reasons for each one, but we've set out the rationale to the Respondent.

14

15

16

17

18

We haven't had a response yet. There's no criticism there because we appreciate everybody has had a very busy weekend. But we would like to tender those documents now.

19

20

21

22

But perhaps I should give Mr. Leathley the

1 chance to comment on the documents in question before
2 handing anything up.

3 MR. LEATHLEY: Thank you.

4 Good morning, Members of the Tribunal. Yes,
5 we received last night a request for a number of
6 documents. And we would be prepared to accept four of
7 them onto the record, but that's as an exception to a
8 general objection.

9 I don't know how much you want to go into it
10 now or whether Mr. Burn should make an application in
11 writing to which we can respond simply to note the
12 documents that we're happy to admit onto the record,
13 if I may, sir.

14 PRESIDENT SIQUEIROS: Yes.

15 MR. LEATHLEY: It would be documents that have
16 been delivered with the numeration of C-307, 308, 309,
17 and 310. Those are all--I think there are two
18 Constitutional Court decisions, a Wildlife Act, and a
19 U.S. field indicator for soils. We have no objection
20 to those.

21 The rest are evidence, sir, and we strongly
22 object. There's a procedure order that this Tribunal

1 issued, and we would like to respect it, even if the
2 Claimants do not. They've shown no exceptional
3 circumstances for the admission of the documentation
4 at this stage. They have explained no reason why
5 these documents weren't in their possession or able to
6 be delivered before now.

7 But critically, sir, the timing. We don't
8 have an opportunity to put these documents to the
9 witnesses or the experts. That time has passed. So,
10 I'm really sorry, sir, but that gate, from our
11 position, has closed. Otherwise, I'm afraid--and I
12 will have to use the phrase--due process will be
13 offended in that regard.

14 So, I haven't heard any application other than
15 the request. So, in that regard, I'm happy to hear
16 further from Mr. Burn. But I'm conscious of the time,
17 and I'm sure this Tribunal, much like us, would rather
18 be spending our time focusing on the experts today.

19 Thank you, sir.

20 PRESIDENT SIQUEIROS: Okay.

21 MR. BURN: I would just like to say it's very
22 interesting to hear Mr. Leathley's submissions on an

1 application that apparently has not been made. We're
2 perfectly happy to make a suitable application.
3 Grateful with respect to C-307 to C-310. We'll hand
4 up copies of those shortly.

5 In respect--we'll come back to the other
6 items. But just for your edification, the Respondent
7 is in breach in respect to Documents C-301 to C-306.
8 Mr. Leathley knows that to be the case, or at least
9 that we have told him that that is the case. So, to
10 present this as a case of breach on the part of the
11 Claimants really is going too far.

12 We'll present an application later in the day.
13 But these are documents that the Respondent was bound
14 to present to disclose at an earlier stage in
15 proceedings and ought to have done so. And we'll
16 present a suitable application later.

17 Thank you.

18 PRESIDENT SIQUEIROS: Okay. Thank you.

19 MR. LEATHLEY: Sir, just a couple of matters,
20 housekeeping matters from our perspective.

21 In terms of documents that should have been
22 delivered, we made a request on Saturday for three

1 documents which are referenced in the ERM Report.
2 Late last night we received two of the three. We
3 would like to just put on the record that we're still
4 awaiting a third document which is apparently a plan
5 or some sort of map which ERM reviewed upon receipt
6 from Mr. Mussio.

7 I will be asking questions in that regard
8 today, sir, with regard to the ERM. But I just wanted
9 to put that on the record.

10 And then one document that we would like to
11 submit, which we hope is uncontroversial, which is a
12 printout from the USDA website which we would like to
13 submit as R-524. It's a one-page document, just the
14 definitions of some terminology which will be relevant
15 to the soil experts.

16 MR. BURN: Mr. Leathley is absolutely right in
17 respect to his request to see three documents that are
18 referred to in the ERM Report.

19 We have located two of the three plans in
20 question and provided those to the Respondent. The
21 third one, Mr. Calvo--Dr. Calvo traveled to Annapolis
22 to his office to look for them yesterday. He couldn't

1 find the right ones. So, the final one--if we can
2 find it, we will. But, obviously, it's a request that
3 was made over the weekend.

4 Mr. Leathley is right to say the request was
5 made. And we have complied with it as far--insofar as
6 we can. Inquiries are being made in San Jose and have
7 been. So, hopefully, we will be able to complete the
8 triumvirate.

9 The indication with regard to the USDA
10 document, that's the first we've heard of it. I'm
11 happy to consider it. It doesn't sound like it's a
12 particularly controversial item.

13 PRESIDENT SIQUEIROS: Okay.

14 We take note, and we will await for the
15 application and the outcome of this production.

16 MR. LEATHLEY: Thank you, sir.

17 PRESIDENT SIQUEIROS: Then I understand we
18 have Mr. Gerardo Barboza.

19 MR. BURN: That is correct. And could
20 Mr. Barboza come up to the witness desk, please.

21 GERARDO BARBOZA, CLAIMANTS' WITNESS, CALLED

22 MR. BURN: Perhaps you want to take your coat

1 off, Mr. Barboza. Mr. Barboza?

2 THE WITNESS: Thank you. Good morning.

3 MR. BURN: Coat. Take it off.

4 SECRETARY GROB: Testing into English.

5 Testing into English. Testing.

6 MR. BURN: Could I just ask the Respondent for
7 a copy of their cross-examination bundle so that I can
8 refer Mr. Barboza to his written evidence.

9 PRESIDENT SIQUEIROS: Good morning,
10 Mr. Barboza. I understand you will be making a
11 presentation and being examined in Spanish; is that
12 correct?

13 THE WITNESS: That's correct.

14 PRESIDENT SIQUEIROS: Good morning,
15 Mr. Barboza. We regret that we could not have your
16 examination on Friday, meaning that you had to spend
17 the weekend also here to appear before us so early
18 Monday morning. But the delays in the process caused
19 this. Hopefully this did not cause any interruptions
20 to a program you may have had in place.

21 As you have probably noted, but I'd like you
22 to hear it directly from me now, it is my

1 understanding that you will be providing a
2 presentation first, and then following that there will
3 be a direct examination by counsel for Claimants,
4 following which you will be cross-examined by counsel
5 for the other party.

6 There may also be some questions in a
7 redirect, and those questions will refer for anything
8 from the cross-examination.

9 If something is not clear to you, please seek
10 clarification. And if you wish to make a--provide any
11 clarification, you may do so subsequently after having
12 responded to the question.

13 As the hearing is being interpreted, into
14 English, should the questions be asked in English,
15 please allow some time for the question to be
16 interpreted. So, please don't rush to answer. Just
17 wait a few seconds to hear the interpretation before
18 commencing your response.

19 As you are probably aware from what happened
20 on Friday, it is advisable to speak slowly to
21 facilitate the work of the Interpreters and Court
22 Reporters.

1 Q. Do you have any changes or amendments to make
2 to that first report?

3 A. No, sir.

4 Q. Looking at Page 24, is that your signature?

5 A. It is correct.

6 Q. Thank you.

7 I just need to repeat the process for your
8 second report. If you go behind the white tab in the
9 file. There's a white tab on the right-hand side
10 there. If you just go behind that. I think you're
11 looking at the English version of your first report at
12 the moment.

13 If you go behind the white tab, it will be on
14 the right-hand side of the file.

15 A. That is correct. Thank you.

16 Q. Could you just do the same for this report?
17 So, just have a quick flick through to satisfy
18 yourself that it is--this is a copy of your second
19 report.

20 A. Correct.

21 Q. Do you have any changes or amendments to make
22 to this second report?

1 A. No, sir.

2 Q. And, finally, is that your signature on
3 Page 19?

4 A. Yes, sir.

5 Q. Thank you.

6 Now, I believe you wish to make a very short
7 opening presentation. I'll invite you to do that
8 momentarily.

9 Once that is done, Mr. Leathley will have some
10 questions for you on behalf of the Republic of Costa
11 Rica. At any time, the members of the Tribunal may
12 have questions. After Mr. Leathley has asked his
13 questions, I may have one or two questions as well.

14 But the job that you have before you is very
15 simple. Your job is to answer all of the questions,
16 put by whomever, to the best of your ability.

17 That is clear?

18 A. Yes, sir.

19 Q. Okay. You may now proceed with your opening
20 presentation.

21 DIRECT PRESENTATION

22 THE WITNESS: Thank you. Good morning,

1 Members of the Tribunal. Good morning, counsel for
2 Costa Rica. Good morning, counsel for Mr. Aven.

3 Sir, fortunately, it was no problem to spend
4 the weekend here in this beautiful city. I'm here
5 with my wife. We enjoyed it. We are satisfied and
6 pleased and also very happy to be in this position.
7 It's a privilege for me to appear before you.

8 I'm going to now begin my presentation. My
9 name is Gerardo Barboza. I'm a biologist, and I have
10 a master's in rural development. My professional
11 career began first as a teacher at the university
12 where I graduated, the National University of Costa
13 Rica, and then I rapidly moved to Guanacaste, out in
14 the field, as an official for conservation areas, a
15 task that I have fulfilled occupying different
16 positions, beginning from a low position in a project,
17 then director of a national park, until, finally, I
18 became director of a conservation area.

19 During this time frame, I, obviously, have
20 addressed many situations with documents, reports, et
21 cetera, so I'm quite familiar with this issue of going
22 through documents and analyzing them. And, therefore,

1 in this case to look--review the documents is
2 something familiar.

3 I have occupied this public position since
4 2008 as part of the National System in Costa Rica,
5 SINAC. Since then I have been working independently.
6 But at the beginning of my fieldwork, I actually
7 worked and continue working to restore wetlands.

8 On the next slide, I briefly provide four
9 pictures of wetlands where I have been active in the
10 past four years. In the upper left, it's a wetland in
11 Corral de Piedra, Guanacaste; the upper right, Palo
12 Verde, where I began working in 1990. I was director
13 for a time there, and I have been a researcher. And I
14 continue working on restoration initiatives for this
15 very important national park.

16 Bottom left, it's a property where I have been
17 working and continue working to restore wetlands there
18 also. And on the bottom right, it is a wetland where
19 we have been working over the past 7 years to restore
20 the ecosystem using the water buffalo as a sort of
21 tool for our restoration work.

22 My work fundamentally in this expertise has

1 focused on the review of documents to verify
2 compliance with the official protocol to determine a
3 wetland.

4 We could divide this in two major components.
5 The first one is to base the Costa Rican legal
6 description relating to this aspect and second to
7 review a number of documents issued by SINAC officials
8 for the supposed determination of there being a
9 wetland on a site.

10 The second part, that is Decree 35803 that is
11 mentioned in the report, provides a protocol to
12 determine and classify a wetland in Costa Rica. This
13 Decree provides that three fundamental characteristics
14 are to be met in order to determine that a zone is a
15 wetland. These are the hydrophilic vegetation, hydric
16 soil, and hydric condition.

17 The process for that determination must go
18 through a soil sampling conducted by a specialist and
19 inventory of the hydrophilic vegetation and a
20 description of the hydric condition of the site.

21 Now, let me briefly go over some of the
22 documents that I believe are most pertinent for this

1 process. I'm essentially going to focus some more--on
2 the upper left, for instance, is the document
3 00282-08, which is C-8 on this--in this file, which
4 determined that there is no protected area on that
5 site.

6 The second one, SETENA, is the Environmental
7 Viability for this property which provides the
8 development policy in Costa Rica in order to permit
9 progress and construction and development on the site.

10 Next, I want to refer to Document SD087-08,
11 which is under R-20 for these proceedings. And this
12 is important because Mr. Manfredi, who wrote this
13 report, points to three very important aspects. These
14 are mentioned in the document.

15 He is a SINAC official in the area, in the
16 ACOPAC area. And fundamentally, what he says is that
17 on that site there are no characteristics that can
18 justify the presence of wetlands in that area.

19 Another relevant aspect is that he describes
20 his evaluation at a time as to how the waters flow on
21 that landscape. He referred to the fact that the site
22 has an area of surface water runoff moving from the

1 highest regions towards the lowest region following a
2 certain channel.

3 Another important aspect in this report is
4 that Mr. Manfredi points out that there is no
5 environmental damage in that area. I point this out
6 because this person is in charge of wetlands precisely
7 as well as investigation of conservation areas.

8 Another important document is one of
9 January 2011. This report or this communication,
10 ACOPAC--it's the Document R-262 in this proceeding in
11 which he indicates that he has certain doubts as to
12 whether there is a wetland in that area.

13 Given this doubt, he recommends, essentially,
14 two things. First, that the National Wetlands Program
15 send somebody to the site to verify whether or not
16 there's a wetland. And he further recommends, as his
17 second recommendation--asked the National Institute
18 for Agricultural Technology to come to the site to do
19 a soil sampling in order to determine the kind of soil
20 that exists there.

21 This report was generated based on inspections
22 that he conducted on 6, 10, 17, and 21 December 2010,

1 but the report is dated early 2011.

2 What I would like to point out is that there
3 is a strong discrepancy here. Because in June 2010,
4 Mr. Manfredi had indicated that there are no
5 characteristics; therefore, there is no wetland there.
6 And Mr. Luis Picardo says that he has some doubt as to
7 the existence or not.

8 The next step is in March 2011 in
9 Document 093-11. This is a report prepared by
10 Mr. Gamboa, coordinator of the National Wetlands
11 Program.

12 At the time, what he reported is that a
13 wetland--a non-tidal palustrine wetland was found on
14 the site. What I'd like to point out here is that in
15 that specific paragraph, he describes the fact that
16 there is some trees, bushes, and palms that are
17 typical of the local ecosystem. He then refers to the
18 presence of hydric soil and a certain condition of
19 groundwater--of surface water.

20 But this is a description by mere sight.
21 There was no sampling done. And that is all he used
22 to make that determination. Later on?

1 He went back to the site accompanied by other
2 officials, and they established the limits of the
3 area.

4 One important aspect here is that as a result
5 of Mr. Luis Picardo's report of March 2011, there was
6 a request not only for the person in charge of the
7 wetlands program to go to the site, but also a visit
8 and inspection of the site with soil sampling by the
9 INTA soil specialist. This individual indeed did
10 travel to the site.

11 And if we would move to the next slide,
12 please.

13 This is the official criterion by INTA, the
14 special--the entity in Costa Rica that specializes in
15 soil. And the conclusion has to do--says the
16 following: "The entropic impact that over decades has
17 occurred in this sector (road infrastructure,
18 deforestation, livestock) and the definition of
19 Management Unit for Point 4--Item 4 refers
20 specifically to this area and does not give rise to
21 classifying the land or soil on this area as typical
22 of a wetland ecosystem."

1 So, this means that there is no hydric soil on
2 the site.

3 Then, based on revised documents that has been
4 revised and analyzed for this case, I can conclude
5 that the SINAC officials did not correctly apply the
6 procedure set forth to determine whether or not there
7 is a wetland on the property. Therefore, the
8 determination of a wetland as reported by them is
9 incorrect and lacks technical legal substance.

10 Thank you.

11 PRESIDENT SIQUEIROS: Thank you, Mr. Barboza.
12 Counsel for the Republic of Costa Rica.

13 CROSS-EXAMINATION

14 BY MR. LEATHLEY:

15 Q. Good morning, Mr. Barboza.

16 A. Good morning. Thank you.

17 Q. I'm going to conduct this cross-examination in
18 English, although I may flip to Spanish depending on
19 how we get on.

20 A. Thank you.

21 Q. So, why do wetlands need to be protected?

22 A. Because they are ecosystems that are very

1 important for the protection of biodiversity.

2 Q. And you mentioned your experience with
3 restoration. Could you talk a little bit about that
4 restoration work that you do of wetlands?

5 A. With pleasure. It's basically studying,
6 conducting, planning, establishing some actions
7 relating to recovery of the ecological functions of
8 those ecosystems that have been damaged not only
9 worldwide, but also in Costa Rica. It is no
10 exception.

11 Q. And the restoration work can take anything
12 from a short period of time to an extended period of
13 time; is that right?

14 A. Correct.

15 Q. And could it be anything from a cheap exercise
16 to being a costly exercise?

17 A. Yes, sir.

18 Q. And what sort of analysis would you want to
19 undertake in order to do a restoration planning?

20 A. Normally countries, and in the case of Costa
21 Rica, use the protocol that was established by the
22 International Protocol of the Convention--

1 Q. Move the mike a little closer to you. It's a
2 little hard to hear you.

3 A. I apologize.

4 Normally, for these processes, there are
5 protocols that have been established by the
6 International Convention on Wetlands.

7 Q. Mr. Barboza, in Section B of your first
8 report, you describe the scope of your instructions.

9 MR. LEATHLEY: And, Members of the Tribunal,
10 I'll do my best to navigate us. Mr. Barboza's first
11 report doesn't have paragraphs, and so it's a little
12 hard to identify between the English and the Spanish
13 version, but I'll do my best.

14 BY MR. LEATHLEY:

15 Q. Section B talks about--of your first
16 report--the scope of your instructions; is that right,
17 sir?

18 And you submit in your report that you are an
19 expert in wetlands. That's the first paragraph of
20 Section B; is that correct?

21 A. Yes.

22 Q. And the aim of your first report was to issue

1 an opinion on the Las Olas case; is that right, sir?

2 A. No, sir. I wanted to verify if there had been
3 compliance with the procedures in order to determine a
4 wetland.

5 Q. This is in the first paragraph of Section B,
6 and I'm going to read from the English version, which
7 says, "The Batalla Abogados firm hired me as an expert
8 for the purpose of introducing me as an expert on
9 wetlands to issue an opinion on the Las Olas case."

10 Is that still correct, sir?

11 A. Yes, sir.

12 Q. And in your second report, you say that--and
13 I'm summarizing from Paragraph 7 and Paragraph 11 of
14 your second report. And look in the last line of
15 Paragraph 7 of your second report where you say that
16 your first report never aimed to determine the
17 ecological conditions present at the site at the
18 present time.

19 Do you see that, sir?

20 A. Yes, sir.

21 Q. And, in particular, in Paragraph 7 and 11 of
22 your second report, you clarify that the aim of your

1 first report was not to determine whether there were
2 wetlands in the property.

3 A. That is correct.

4 Q. Now, can you please turn to your second report
5 and look at Sections A and B of Paragraph 8. Do you
6 see that, sir? And here you set out--I'm sorry.

7 A. Yes, sir.

8 Q. You have that there, do you, sir?

9 A. Yes, sir.

10 Q. And there you set out the purpose of your
11 first report. And I'd like to read it. I'll just
12 read the English version, if that's okay with you,
13 sir.

14 It says, "To determine whether officials from
15 the SINAC and other participants followed exactly and
16 applied the provisions of the MINAE Decree, which is
17 the official procedure of the government of Costa
18 Rica, to establish the identification, classification,
19 and conservation of wetlands."

20 And then Paragraph (b) says, "To determine
21 whether methodological or logical shortcomings
22 affected the conclusions reached by the SINAC."

1 Now, let's go back to your first report, sir.
2 And I'd like to turn to the "Conclusions" section on
3 the last page. And I'd like you to look at Paragraph
4 5. And here you say, "In my expert opinion, there is
5 no palustrine wetland on the site indicated within the
6 Las Olas project area."

7 Do you see that, sir?

8 A. Yes, sir.

9 Q. But you had just said that you were not
10 determining if there were wetlands, and yet here
11 there's a clear conclusion that there are no wetlands.

12 How do you reconcile those two statements,
13 sir?

14 A. Well, basically, this conclusion arises from
15 the interpretation of the outcome of the SINAC
16 official reports. And when it says "in the area,"
17 it's not referring to the property itself but the
18 district, the area, and that's where the determination
19 was made.

20 Q. From your first report, is it your conclusion
21 that there are no wetlands based on your independent
22 analysis, or is it your conclusion that the documents

1 that you read were telling you that there were no
2 wetlands?

3 A. The latter. It was the documents.

4 Q. Now, your first report comprises a number of
5 questions, and then you offer answers to those
6 questions.

7 And I'd like you to turn, sir, to Question 3
8 in your first report. In the English version, which
9 I'm going to be relying on--it's on Page 10, and Page
10 9 in the Spanish version.

11 Do you have that, sir?

12 A. Yes, sir.

13 Q. And here you list the means of identifying a
14 wetland; correct?

15 A. That is correct.

16 Q. And let's just work through this--this
17 response to Question 3. At Paragraph (a) of the list
18 appears--there it starts with "Field information."

19 Do you see that, sir?

20 A. Yes, sir.

21 Q. Then in the following paragraph there are the
22 three criteria that appear in Article 6 of the MINAE

1 Decree 35803. And in the English version, I'm looking
2 at the bottom of Page 10 and the top of Page 11. In
3 the Spanish version, I'm looking at Page 10 in
4 particular.

5 Do you see that, sir?

6 A. Yes, sir.

7 Q. Although, as you said, the MINAE Decree only
8 came into effect in April of 2010; is that right?

9 A. Yes, sir.

10 Q. And this is after you had left SINAC?

11 A. That is correct.

12 Q. And then in the section below Question 4 on
13 the next page, Paragraph (a)--and in the Spanish
14 version this is on Page 11; in the English version,
15 this is still on Page 11--the list identifies that in
16 your experience, one has to first observe the three
17 basic elements that define a wetland; correct?

18 A. Correct.

19 Q. And the methodology includes, at
20 Paragraph (a)--sorry, Paragraph (b)--an accurate field
21 qualitative and quantitative assessment; correct?

22 And then--is that correct, sir?

1 A. Yes, sir.

2 Q. And then in Paragraph (c) you require yourself
3 to log the presence of those three conditions; is that
4 correct, sir?

5 A. That is so.

6 Q. Including taking soil samples.

7 Paragraph (d) requires that you delimit the
8 wetland by walking the perimeter; is that correct?

9 A. Yes, sir.

10 Q. And then you plot with a GPS survey as per
11 Paragraph (e); is that correct, sir?

12 A. Yes, sir.

13 Q. Now, Mr. Barboza, you didn't undertake any of
14 these steps, did you, sir, in preparing your first
15 report?

16 A. No, sir, because my task was not to identify a
17 wetland on the site. It was just to assess/to
18 evaluate the SINAC documents relating to the topic.

19 Q. And in--and in doing that evaluation, you
20 didn't even visit the site either, did you, sir?

21 A. That is correct.

22 Q. And in your review of the documents, you

1 didn't actually review all of the documents, did you,
2 sir?

3 A. I looked at many documents.

4 Q. But you didn't review all of the documents,
5 did you, sir?

6 A. I reviewed many documents on file that related
7 to the specifics, as I pointed out in my presentation.

8 Q. Yes. But you didn't review all of the
9 documents in this file, did you, sir--all of the
10 documents that we have been privy to in this
11 arbitration?

12 A. It wasn't necessary.

13 Q. But you can confirm that you did not review
14 all of the documents; correct?

15 A. I don't understand what you mean by "all the
16 documents." That's very broad.

17 Q. Well, at Page 12 of your second report, you
18 refer to various documents, and in your first report
19 you index some of the documents.

20 But those are by no way near the complete
21 universe of documents relevant to this case, are they,
22 sir? The Las Olas case that you were instructed to

1 provide an expert opinion on.

2 A. The documents that are mentioned in both the
3 first and second report are those that related to
4 identify and delimit a wetland on the site.

5 Q. Let's turn to Page 27 in the Spanish version
6 of your report--your first report, sir. In the
7 English version, this is on Page 27 as well.

8 This is the appendices and list of legislation
9 and documentation reviewed and analyzed. Do you see
10 that?

11 A. Yes, sir.

12 Q. And you list 20 documents. Do you have that
13 there, sir? You actually titled them--the last one is
14 "Document Twenty." Yes, sir? Is that correct?

15 A. They're not numbered here, but it does look
16 like 20.

17 Q. You should be on Page 27. And if you turn to
18 Page 28, you see the last entry is "Documento Veinte."

19 A. Yes, sir.

20 Q. And this lists legislation, laws, and then a
21 handful of other documents; correct?

22 A. Could that be translated for me, please.

1 Q. I'm sorry, sir?

2 A. That is correct.

3 Q. Thank you.

4 Now, in Paragraph 44 of your second report,
5 you state that if the Costa Rican officials had
6 rigorously performed certain procedures, they would
7 have concluded the absence of a wetland.

8 That's about halfway down in Paragraph 44. Do
9 you see that, sir?

10 A. No, I haven't found it. I apologize.

11 Q. Go about halfway down on the right-hand margin
12 of Paragraph 44, and you'll see the short beginning of
13 the sentence that says "Si los."

14 A. Ah, yes. Now I found it.

15 Q. It says, "If the officials had rigorously
16 performed the above activities, they would have
17 complied with the procedure and they would have also
18 come to the conclusion of the absence of a non-tidal
19 palustrine wetland at that specific site."

20 Is that your testimony, sir?

21 A. That is an analysis that I carried out based
22 on the documents reviewed.

1 Q. And so, do you believe you undertook a
2 rigorous analysis, sir, in your first report?

3 A. Yes, sir.

4 Q. Even though you didn't review all of the
5 documents?

6 A. The term "all the documents" having to do with
7 the case is very broad. And to clearly--say this in
8 clear terms, I looked at what was relevant to the
9 determination of a wetland on the site.

10 Q. You said in your presentation this morning
11 that you had referred to an April 2011 INTA finding.
12 Can you show me where in your report the document is
13 that relates to that, sir?

14 Sir, we can come to the INTA report later
15 because I will have other questions related to that.
16 So, if you're struggling, I'll let you continue to
17 think where that might be.

18 A. In any event, although I haven't found it, it
19 is basically the INTA official report that issues an
20 opinion as to the soil on that--in that area and
21 specifically that area.

22 Q. Now, in your second report, sir, you say, in

1 Paragraph 20, that it made no sense to carry out a
2 field visit to the property in 2015.

3 A. Will you please repeat.

4 Q. Yes.

5 In your second report, in Paragraph 20, you
6 say that it made no sense to carry out a field visit
7 to the property in 2015.

8 A. That is correct.

9 Q. So, notwithstanding the fact that your
10 conclusion in your first report said there were no
11 wetlands, you still felt it wasn't necessary to
12 undertake a site visit?

13 A. Correct. Because my expertise focused on
14 reviewing documents, not a field study.

15 Q. Now, Mr. Barboza, in general, do you like to
16 perform site visits?

17 A. It's what I spend most of my time doing as a
18 field biologist and a research investigator for
19 wetlands.

20 Q. You didn't conduct a site visit, but I
21 guess--so in general, you do like to visit sites but
22 not always; is that right?

1 A. My working context varies. There's a
2 difference in routine--my routine work. In this case,
3 it was an expert activity that was based on reviewing
4 SINAC documents and other relevant documents in order
5 to determine the existence or not of a wetland.

6 Q. Mr. Barboza, would you agree that the goal of
7 every scientist is to be consistent in your approach
8 and your conclusions?

9 A. Would you please repeat the question.

10 Q. Yes.

11 Would you agree that the goal of every
12 scientist is to be consistent in your approach and
13 your conclusions?

14 A. Yes.

15 Q. And so, having concluded in your first report
16 that there were no wetlands, you presumably wanted to
17 conclude that there were no wetlands in your second
18 report; is that right?

19 A. You're referring specifically to Conclusion 5
20 in my report? If you look at the previous ones, it is
21 quite clear that it is a deduction based on the
22 earlier conclusions arising from the review of the

1 reports.

2 Q. Mr. Barboza, if I were to show you a report
3 that said that there were no swamps at the Las Olas
4 site, would you agree that it would conform to your
5 conclusion of there being no wetlands at the site?

6 A. Will you please repeat.

7 Q. Yes.

8 If I were to show you a report that said that
9 there were no swamps, would you agree that it would
10 conform with your conclusion of there being no
11 wetlands?

12 A. The words "there were no wetlands" or "there
13 are no wetlands" is open. I am not only referring to
14 my expertise in the specific documents, but also to a
15 specific territory within the property which is in the
16 southwest of the property.

17 Q. So, this may be a translation issue because I
18 don't have the live feed. But let me ask you the
19 question in Spanish so that we can be on the same
20 page.

21 If I were to show you a report indicating or
22 confirming that there are no swamps, would you concur

1 that, in accordance with your conclusion, that there
2 are no wetlands on the property?

3 THE REPORTER: Excuse me. I'm not getting the
4 answer in English.

5 A. One would have to see the specific point--

6 BY MR. LEATHLEY:

7 Q. I'm sorry, Mr. Barboza. You may have to
8 repeat your answer.

9 MR. BURN: It's coming through now. Can the
10 Interpreter just begin that again?

11 INTERPRETER: I'd rather Mr. Barboza repeat.

12 A. Could you please repeat the question?

13 BY MR. LEATHLEY:

14 Q. Sir, are you able to answer the--

15 MR. BURN: Sorry. Mr. Barboza needs to repeat
16 the question (sic). The Interpreter made a request.
17 It would probably help, actually, if you had the
18 English and you would be able to follow. So,
19 Mr. Barboza needs to repeat his answer.

20 MR. LEATHLEY: That's what I'm waiting for.

21 A. But I'm also waiting for you to repeat the
22 question, please, sir.

1 BY MR. LEATHLEY:

2 Q. If you, Mr. Barboza--or if I were to show you
3 a report indicating that there are no swamps, would
4 you agree that based on your--it is in accordance with
5 your conclusion that there are no wetlands?

6 A. The way you're posing the question is open and
7 general. It refers to wetlands and to the property in
8 general, I suppose.

9 My answer is I would have to see the document
10 and the specific points that they refer to. My work
11 was limited to the documents and to a specific sector
12 on the property, the southwest, not the overall
13 property.

14 Q. You've referred, in both your reports, to
15 Decree 35803 that establishes the characteristics that
16 must be present to determine the existence of a
17 wetland, and Article 5 and Article 6 in particular;
18 correct?

19 A. Yes, sir.

20 Q. And you say in your first report, in answer to
21 Question 4, that the Decree does not provide a
22 formally established protocol; is that right, sir?

1 That's on Page 11 of the Spanish version.
2 Look at the top of the second paragraph after
3 Question 4. Do you see that, sir? Do you see that
4 wording?

5 A. That is correct.

6 Q. So, there is not an official procedure to
7 determine the existence of the requirements provided
8 in the Decree; is that your position?

9 A. The Decree doesn't provide a step-by-step
10 description, but it clearly indicates that the three
11 essential characteristics are to be met. And to reach
12 those characteristics should be done following a
13 scientific procedure or protocol, as I pointed out
14 earlier, such as soil sampling, vegetation, and
15 vegetation inventory.

16 Q. And in Paragraph (a) you say that one looks at
17 those three criteria that you've just mentioned, and
18 you say, "If there is a possible wetland, then an
19 accurate field qualitative and quantitative assessment
20 is made." Is that correct?

21 And here in the English version I'm at the top
22 of Page 12, and in the Spanish version I'm on Page 11

1 with the Paragraph (b).

2 Do you see that, sir?

3 A. Correct.

4 Q. And by "possible wetland," you mean that there
5 might be some evidence of a wetland, but there is not
6 necessarily certainty; correct?

7 A. This paragraph basically refers to the
8 analytic approach of the Decree. Relating to--let us
9 imagine we're not applying this situation to the
10 specific site, so we're going to Site X where,
11 presumably, there could be a wetland.

12 So, you begin with a qualitative analysis of
13 the landscape first, followed by seeing if one
14 anticipates there may be or if they anticipate there
15 is no wetland.

16 In the first case, if you think that there
17 could be one, then the procedure is initiated. But if
18 you decide there isn't one, that's it.

19 Q. My emphasis is on the word "possible" that
20 you've used in your expert report.

21 MR. BURN: Sorry to interrupt. I know the
22 Interpreters are having a tough time because,

1 Mr. Leathley, you're using your fluency in Spanish to
2 listen to the answers and then you're beginning your
3 questions in English without waiting for the
4 translation to come through, and that's going to
5 create transcript problems.

6 It might be better if you were, despite your
7 fluency in Spanish, equipped with earphones so that
8 you knew where the interpreters were and we made sure
9 we had a full transcript.

10 MR. LEATHLEY: Very good. My apologies if I'm
11 cutting in front of the Translators. I will count to
12 three after.

13 ARBITRATOR BAKER: Tres.

14 BY MR. LEATHLEY:

15 Q. Let me repeat the question, sir. I'd like to
16 focus in particular on the word "possible" that you
17 use in Paragraph (b).

18 You say "if there is a possible wetland." And
19 I would like to know--presumably there are
20 circumstances where one could visit a wetland and not
21 be 100 percent certain that you were looking at a
22 wetland; is that right?

1 A. One wouldn't be visiting specifically a
2 wetland but an area where they could--one could find
3 characteristics that would result in determining a
4 wetland. So, it is a qualitative assessment of the
5 landscape as an expert in order to come up with a
6 predetermination. It's kind of a pre-assessment. And
7 once that is done, then you move to the next step.

8 If the preliminary understanding is to
9 disregard, then the inspection comes to an end. But
10 if it is determined to be possible, then the immediate
11 protocol, according to the Decree, is to initiate the
12 sampling process to then move on to the different
13 steps to verify the specific sectors of that area
14 where there is an existence.

15 Q. Thank you.

16 MR. LEATHLEY: Thank you, Mr. Burn.

17 BY MR. LEATHLEY:

18 Q. Let's go back again to the wetlands definition
19 because this is something I'd like to explore a little
20 bit further with you, sir.

21 So, as I understand your answer, let's assume
22 in this area in front of you in this room we're in the

1 middle of the countryside. And you may see some
2 characteristics of a wetland, may not be 100 percent
3 certain. And that's when, in Paragraph (b) you say,
4 "Then an accurate field qualitative and quantitative
5 assessment is made."

6 Now, I'm assuming that with the wetlands
7 definition, it refers to the wetland could be
8 temporary or permanent, it could be visible or
9 invisible, it could be swampy or flooded. I'm using
10 all the terms--technical terms which we've seen in the
11 definition of a wetland in this arbitration.

12 So, my understanding is it's quite broad, at
13 least the language, to try to capture whether or not a
14 wetland exists; is that right, sir?

15 A. I don't agree with the first part of what you
16 said because you're saying "a permanent wetland." I
17 didn't fully understand you.

18 Do you mean "permanent" or "not permanent"?
19 Could you please repeat that part of what you said?

20 Q. Yes.

21 In English, it's "temporary" or "permanent."

22 A. Yes. A wetland is not permanent or

1 disappears. What varies is the wetland regime. The
2 territory where the wetland is located could be
3 flooded temporarily or permanently but not the
4 ecosystem. The ecosystem remains. What changes is
5 the flooding stages or the temporality of its wetland
6 condition.

7 Q. Yes. And so, in terms of an inspection,
8 something may be apparent or it may not, depending on
9 the particular time of year or the particular status
10 of that wetland?

11 A. What is most visible is the condition of
12 humidity or flooding and the type of vegetation
13 present. For the kind of soil, it might be very
14 obvious or perhaps necessarily it will be necessary to
15 verify it.

16 Q. So, essentially, from a scientific
17 perspective, there is a margin of appreciation. "A
18 margin of appreciation," by that I mean there is a
19 spectrum of analysis that if you, according to
20 Paragraph (b) of your--on Page 12--Page 11 of your
21 Spanish version, where you said if there's a possible
22 wetland, then you have to go into a quantitative and a

1 qualitative assessment, is, essentially, because you
2 then have that margin of appreciation where it may be
3 obvious or it may be less obvious based on those
4 criteria that are contained in the definition in the
5 Decree; is that right, sir?

6 A. No, sir. I'm not here talking about a margin
7 of the assessment. I'm talking about a scenario of
8 possible or not possible. That's what I'm referring
9 to.

10 Q. I think we may be talking about the same
11 thing. You have to try to evaluate whether there is a
12 wetland, and you can only do that by looking at the
13 physical elements in front of you.

14 And the definition captures elements that may
15 be temporary or permanent, visible or invisible, or
16 may have different types of hydric conditions, swampy
17 or flooded. So, it's a broad definition. It's an
18 inclusive definition.

19 A. Yes, but that premise of visible or not
20 visible isn't clear to me.

21 Q. Let me find the wording that I'm referring to
22 in a moment, sir, when I say "visible" and

1 "invisible."

2 But I wonder if you can help me with
3 something. If we're in the situation of a possible
4 wetland, what would the situation require when you're
5 applying Costa Rican law? Would you err on the side
6 of ignoring it, or would you err on the side of
7 investigating and/or identifying it?

8 A. Could you please repeat the question?

9 Q. Did you not understand the question, sir?

10 A. No.

11 Q. Okay. In the case of a possible wetland, what
12 would the situation require? Do you err on the
13 side--do you tend on the side of ignoring it, or do
14 you err on the side of investigating and/or
15 identifying it?

16 A. I would investigate carefully to see if the
17 essential characteristics that are to be complied with
18 are met to be able to determine that there is a
19 wetland on the site.

20 Q. Thank you, sir.

21 A. My pleasure.

22 Q. If you were advising a developer, that

1 quantitative and qualitative assessment to develop
2 some certainty, presumably, would be something that
3 you would encourage the developer to undertake; is
4 that right?

5 A. I agree.

6 Q. And would you agree, sir, that, in fact, it's
7 really on the developer to have a look and ensure that
8 before making a D1 Application, that if there is
9 evidence of a possible wetland, that that sort of
10 qualitative or quantitative assessment that you've
11 identified in your experience is undertaken?

12 A. That's correct.

13 Q. Mr. Barboza, you reviewed the Environmental
14 Viability granted by SETENA in 2008; is that correct?

15 A. Yes, sir.

16 Q. And you reviewed the D1 Form that was
17 submitted by the Claimants; is that correct?

18 A. Yes, sir.

19 Q. And your conclusion was that you didn't find
20 any reference to a possible impact in their
21 development of the project; is that right?

22 A. No, sir.

1 Q. Let me ask the question again. Let me ask it
2 in Spanish, because maybe the negatives are confusing.

3 And in your analysis of the D1 Application,
4 you found no reference to a possible impact in project
5 development; is that true?

6 A. Could you please provide me with that document
7 so that I can take a look at it?

8 Q. The document is quite a large document, but my
9 understanding, sir, from your conclusion of your
10 review of the documents, when you say that there was
11 no wetland, would presumably be that on reviewing the
12 D1 Application, you did not find any reference to a
13 possible impact in the development of the project.

14 A. I would like to go back to an earlier reply
15 and to something I pointed out in my presentation.

16 I was not invited to assess the project as a
17 whole, but the specific situation derived from the
18 alleged finding of a wetland in a specific area on the
19 property. So, my approach was always focused on that
20 land and the documents relating specifically to that
21 area.

22 Q. Understood, sir. And without wanting to turn

1 the pages of a 124-page document, I would suggest to
2 you that it is our understanding from your
3 report--and, of course, counsel can always clarify
4 later if I'm mistaken.

5 But it is our understanding that upon your
6 review of the D1 Application, your conclusion was that
7 there was no impact from the project that was to be
8 built. And as I understand your answer, you were
9 referring in your analysis to certain parts of the
10 project; is that right?

11 A. In the analysis, I basically focused on the
12 protocols having to do with soil and water in that
13 specific area, protection of those elements.

14 Q. The D1 Application only referred to the
15 Condominium Section; is that right, sir?

16 A. I don't clearly understand what you're trying
17 to say.

18 Q. Let's go back to your PowerPoint, sir.

19 If we can put up--actually, you don't need to
20 put it up.

21 There was a map, an aerial map, in your
22 Report. I'm showing it to you now, sir. I don't know

1 if that looks familiar to you. I'll show it to the
2 Tribunal so they can find the correct page.

3 The map has a red line bordering a certain
4 part of the land in question.

5 A. Thank you.

6 Q. Are you aware, sir, of what the Condominium
7 Section is?

8 We'll look at the map in a moment, sir. Maybe
9 just focus on my question for now. We'll come to the
10 map in a second.

11 A. I do apologize.

12 Q. Yes, sorry, sir. We've got lots of pieces of
13 paper.

14 Are you aware of what the Condominium Section
15 is?

16 A. Basically, what this map does is map the
17 property where there is a condominium project in the
18 plans. This is the red line that we can see on the
19 satellite image.

20 (Overlapping interpreter channel with
21 speaker.)

22 BY MR. LEATHLEY:

1 Q. Are you aware of other sections that were
2 being developed at the Las Olas Project site, were
3 you, sir?

4 A. It is my understanding that that was the
5 case, but I'm not very clear as to the different
6 sections.

7 Q. You were instructed just to look at the
8 Condominium Section; is that right, sir?

9 A. Basically, everything having to do--to the
10 territory in the southwest.

11 Q. Let's go back to your First Report, and I'd
12 like you to turn to Page 13, please.

13 It's also 13 in the English version, and this
14 is the section where you're still answering the
15 Question 4. And in this section of the text, there
16 appears after Paragraph F--you list out the decree and
17 the ecosystems that are associated with palustrine
18 wetlands; is that correct, sir?

19 A. Correct.

20 Q. Then there are a series of seven bullet
21 points.

22 Do you see that, sir?

1 A. Yes, sir.

2 Q. I wonder if you could read out for us those
3 seven bullet points.

4 A. With pleasure. Shall I go ahead?

5 Q. Please, sir.

6 A. "Swamps, estuaries, permanent saline brackish
7 alkaline pools.

8 "Swamps, estuaries, seasonal
9 pools/intermittently saline/brackish alkaline.

10 "Swamps, estuaries, permanent freshwater
11 pools, pools (less than 8 hectares).

12 "Swamps and estuaries on inorganic soils with
13 a virgin vegetation underwater at least during the
14 majority of the growth period.

15 "Swamps, estuaries, seasonal pools,
16 intermittent fresh water on inorganic soils includes
17 flooded depressions (charge and discharge lagoons),
18 potholes, seasonally flooded plains, cypress swamps.

19 "Treeless marshes, includes shrub or open
20 bogs, fens, bogs, and lowland marshes.

21 "Freshwater forest wetlands, includes
22 freshwater swamp forests, seasonally flooded forests,

1 tree swamps on inorganic soils."

2 Q. Thank you, sir.

3 And these you cite in your report, and you
4 would confirm that these come from the MINAE Decree of
5 2010, 35803; is that correct?

6 A. Yes, sir.

7 Q. And that's a quote from that Decree; is that
8 right, sir?

9 A. Yes, sir.

10 Q. Could we have a look at Exhibit R-11. Should
11 be in your bundle. It is behind Tab 6.

12 Have you seen this document before, sir?

13 A. Yes, sir.

14 Q. This is a geological--hydrogeological survey
15 prepared by Roberto Protti.

16 MR. BURN: Sorry to interrupt. Could you just
17 point out where in Mr. Barboza's reports he addresses
18 this?

19 MR. LEATHLEY: I have no idea, sir, but he's
20 just confirmed that he's seen it.

21 MR. BURN: Right, but we're under instruction
22 to maintain cross-examination within the scope of the

1 evidence.

2 MR. LEATHLEY: And within his expertise. And
3 he's just confirmed that he's seen it.

4 MR. BURN: Well, sir, I'd invite the Tribunal
5 to consider the point that he may have seen it but
6 he's not given testimony on this document.

7 MR. LEATHLEY: Sir, I would say given that
8 he's confirmed already quite freely that he's seen it,
9 I think it's very much within the ambit of his expert
10 testimony.

11 PRESIDENT SIQUEIROS: Why don't he make--why
12 don't you go ahead with the question, and we'll
13 determine whether it's appropriate or not.

14 MR. LEATHLEY: Thank you, sir.

15 BY MR. LEATHLEY:

16 Q. When did you see this report first, sir?

17 A. I don't frankly recall if it was during the
18 First or Second Expert Report.

19 Q. But this document is not referenced in the
20 documents that you've seen, is it, sir?

21 A. In neither Report do I refer to this document.

22 Q. Why is that, sir?

1 A. Because, as I had already pointed out in the
2 process of this statement, I focused on the chief
3 documents that related to determining the existence of
4 a wetland.

5 Q. You reviewed the SETENA file; correct?

6 A. I actually looked--reviewed a number of
7 documents; and as I pointed out in my presentation, I
8 focused my expert activity on what was most relevant
9 to the determination of a wetland.

10 Q. Can you turn to Page 27 of your First Report,
11 sir. This is the list of documents. And if you go
12 down to Document 14, it says, "Document D1, Las Olas
13 Project, Environmental Viability."

14 That's the D1 Application; correct?

15 A. Could you please repeat the number?

16 Q. 14.

17 A. Okay, yes.

18 Q. And you reviewed that document, did you, sir?

19 A. Yes, sir.

20 Q. Let's go back to R-11. This is behind Tab 6.
21 Now, let's have a look at Page 2. If you'd turn the
22 page, sir. Now, on the left-hand side of your file as

1 it's open, you'll see the first paragraph, and you'll
2 see the last two lines, the sentence that begins on
3 the last--the penultimate line says "Los Terrenos"?

4 Do you see that, sir?

5 So, there's a top note--there's a top
6 paragraph, the first paragraph on the page, and then
7 look at the last two lines, and you see "Los
8 Terrenos."

9 Do you see that, sir?

10 A. Yes, sir.

11 Q. I'm reading the last two lines: "The land on
12 this project have good drainage conditions. However,
13 towards the central zone or area, there are
14 swampy-type, flooded land with poor drainage."

15 A. Yes, sir.

16 Q. Did you see that when you reviewed this
17 document the first time?

18 A. I don't recall if it was the first or second
19 time; but yes, I had seen the document.

20 Q. Did you see the other references to "pantanos"
21 in this report?

22 A. In the one we're looking at?

1 Q. In this entire report that you're looking at,
2 yes, the one you confirmed that you had read before.

3 A. Could you show me the specific area?

4 Q. I can in a moment. I'm just asking you at
5 this stage whether you remember seeing a number of
6 references in this report to "pantanos."

7 A. I don't recall correctly. I'd have to go
8 through it again.

9 Q. "Pantanoso" was the term that was used by the
10 MINAE and is used by the MINAE Decree that you read
11 out a moment ago; is that right, sir? From your
12 Expert Report.

13 A. The Decree refers to this type of ecosystem,
14 that is correct.

15 Q. Thank you, sir. Just one second. I just want
16 to check something.

17 (Pause.)

18 Q. Sir, let's go into this Report just briefly.

19 On the same page--you should have that--the
20 page that I was reading from a moment ago, at the
21 bottom of that page, you see a section with a title,
22 "Geomorphology."

1 Do you see that, sir?

2 A. Yes, sir.

3 Q. You say in the third line--sorry. I beg your
4 pardon. The report says in the third line--and I'm
5 going to read it in Spanish: "These sites do not show
6 threats of seasonal flooding since they're outside the
7 influence zone of any river system capable of
8 generating these type of conditions.

9 "However, towards the western part, there is a
10 swampy-type area possibly developed due to the poor
11 drainage conditions in said sector."

12 Do you see that, sir?

13 A. Yes, sir.

14 Q. And if we can turn over the page--a couple of
15 pages, you see at the top of the page, there's some
16 numbering in handwriting. Look at the right-hand page
17 now that's open.

18 Do you see the right-hand page there that
19 you've got open on your file?

20 A. Yes, sir.

21 Q. At the top, there's some black bullet points,
22 some square points?

1 PRESIDENT SIQUEIROS: Perhaps you might refer
2 him to the page number that's in the top--

3 MR. LEATHLEY: Yes.

4 BY MR. LEATHLEY:

5 Q. It's 128 or in the circular ACOPAC folio, it's
6 302.

7 A. Yes.

8 Q. And I'd like to read the first two bullet
9 points: "Type of aquifers present in the subsoil;
10 depth at saturation levels."

11 Do you see those, sir?

12 A. Yes, sir.

13 Q. Then let's turn the page again to Page 129.
14 And there's a paragraph numbered 6 at the top.

15 Do you see that, sir?

16 A. Yes, sir.

17 Q. And then you go about seven lines down,
18 there's actually, in the photocopy itself, it's
19 circled, "sin embargo."

20 Do you see that, sir?

21 A. Yes, sir.

22 Q. "Towards the western area, there is a swampy

1 type of area, possibly developed due to poor drainage
2 conditions in said sector."

3 Do you see that there?

4 A. Yes, sir.

5 Q. And then there's a map--let's keep turning the
6 pages.

7 We're still in R-11. Keep turning the pages.
8 On the left-hand side there, sir, you can see a
9 different type of coloration or pattern on the map on
10 the west-hand side, and it says, "Flooded section";
11 correct?

12 Sir, would you say that these are indicators
13 of a possible wetland?

14 A. Correct.

15 Q. Can we go to, sir, Page 22 of your First
16 Report? And the third paragraph of Question 4.

17 So, Mr. Barboza, you referred in Page 22,
18 third paragraph in question Question 4 of your First
19 Report to the refilling and draining of wetlands;
20 correct?

21 A. Can you tell me which is the specific
22 paragraph, please?

1 Q. Yes. Let me help you.

2 A. Where it says, "On the basis of the alleged
3 wetland"?

4 Q. Yes. In the Spanish version, it says,
5 "(conviene)," and the English--I'm going to read the
6 English. Apologies. It's a Monday morning.

7 "Based on the fact that the supposed wetland
8 had been filled in, they should have at least done
9 photo interpretation of the specific land," et cetera,
10 et cetera.

11 And the point I just want to establish, sir,
12 is your Report there is referring to the refilling and
13 draining of wetlands, or at least the accusation of
14 that; is that right?

15 PRESIDENT SIQUEIROS: Mr. Leathley, just
16 before--you're referring to the paragraph that begins
17 in Spanish, "(conviene hacer referencia)," but the
18 English translation that you were reading does not
19 seem to be--or I don't identify that to correspond to
20 this paragraph.

21 MR. LEATHLEY: Yeah, sorry, sir--it's the
22 previous paragraph in Spanish. So, it's

1 "(partiendo)."

2 PRESIDENT SIQUEIROS: The previous paragraph.

3 MR. LEATHLEY: Yes, sir. Thank you. The lack
4 of numbering is a little challenging.

5 BY MR. LEATHLEY:

6 Q. So, it's a simple point I just wanted to
7 establish, sir. You're looking at this accusation of
8 refilling and the draining of wetlands; is that right,
9 Mr. Barboza?

10 A. What it says there, yes, correct.

11 Q. The supposed fill may be due to land
12 transformation or deposits; correct? This is
13 Paragraph 3 of Question 4, of the answer to Question
14 4. It's the paragraph in Spanish that starts,
15 "(conviene hacer referencia)."

16 A. That's the next one.

17 Q. And then let's go to the next
18 paragraph--sorry, sir. You have that previous
19 paragraph; correct?

20 I'm afraid I need to get a "yes" or a "no" for
21 the record. You can see where you're referring to
22 "supposed fill may be due to land transformation or

1 deposits"?

2 A. Correct.

3 Q. And then again, on Page 23 of your First
4 Report, in the paragraph before the Conclusions, you
5 suggest that the suspected filling is due to "land
6 transformation and runoff water works"; is that
7 correct?

8 A. Yes, sir.

9 Q. And based on your earlier answers, this is not
10 your independent review; this is your review of what
11 the documents are telling you; is that right?

12 Mr. Barboza--

13 A. This paragraph specifically makes reference to
14 the previous paragraphs that have to do with Protocol
15 1, parentheses, water protection; and Protocol 2,
16 parentheses, soil protection, of the Environmental
17 Management Plan.

18 Q. Yes, sir, but I'm trying to establish how you
19 reached this conclusion in your Report, first of all,
20 by understanding what the conclusion is.

21 You're saying that the supposed fill may be
22 due to land transformation or deposits, and then

1 you're saying that that suspected filling is due to
2 land transformation and runoff water works.

3 And then I asked you to clarify based on your
4 earlier response that this is a conclusion reached
5 based on your analysis of some of the documents, not
6 on a site visit; is that correct, sir?

7 A. Correct. This is a deduction, as I said. I
8 could read Protocol 1, which states: "The following
9 action was going to be carried out: A, drainage to
10 the extent possible maintaining natural drainage or
11 directing those that would be modified, and when
12 deemed necessary, gradients will be established."

13 Then in Protocol 2--"gradient breaks and traps
14 will be used."

15 Then in Protocol 2, Page 23, the following
16 actions would be carried out: "A, rainwater drainage
17 in the project area to minimize runoff and soil
18 displacement. When deemed necessary, gradient breaks
19 and/or traps will be used.

20 "C, slopes will have moderate inclination, and
21 those higher than 1 meter will be protected and road
22 cuts will be protected using permanent works to

1 prevent landslides.

2 Q. And we can read your Report--

3 A. Excuse me. Let me conclude and finish reading
4 this paragraph.

5 And this the next one: "F, soil removed will
6 be placed in appropriate locations within the area or
7 at a site authorized by the owner and deposited.
8 Meanwhile, they will be protected."

9 Q. Thank you.

10 A. Those two protocols are the ones that led me
11 to reach a deduction, which is the one you pointed--

12 Q. And let's go to the last sentence of the
13 paragraph before the Conclusion on Page 23. Do you
14 have that there, sir?

15 It says--and I'll read the English. It says:
16 "However, field verification and a soil study would be
17 required to evaluate and discard this issue, which was
18 not done."

19 Do you see that sentence there, sir?

20 A. Yes, sir.

21 Q. So, you reached the conclusion about the
22 filling of the land without conducting the soil study;

1 is that right?

2 A. Specifically, it is indicated that it is need
3 to do--that it should be checked through a field
4 verification; but based on Protocols 1 and 2, the
5 deduction is that there is an evident need to
6 transform, and that is what they say was being done.

7 Q. Mr. Barboza, have you seen the Green Roots
8 Report submitted in the course of this Arbitration?

9 A. No, sir.

10 Q. Drs. Perret and Singh have in their Report
11 found a layer of refill of over 1 meter of thickness
12 in a certain area of the site. This area was where
13 refilling had been alleged.

14 Are you aware of where the refilling had been
15 alleged to have taken place in relation to the site
16 that you had been asked to analyze?

17 A. I don't physically know exactly where it's
18 located.

19 (Overlapping interpreter channel with
20 speaker.)

21 PRESIDENT SIQUEIROS: --of the Report, so--

22 MR. LEATHLEY: Absolutely, sir, and I don't

1 intend to take him to the Green Roots Report.

2 Thank you, sir. I don't have any further
3 questions.

4 PRESIDENT SIQUEIROS: Mr. Burn?

5 MR. BURN: No questions from the Claimants,
6 sir.

7 PRESIDENT SIQUEIROS: Mr. Nikken? Mr. Baker?

8 I don't have any questions either. Thank you,
9 Mr. Barboza.

10 THE WITNESS: Thank you.

11 PRESIDENT SIQUEIROS: You are now released as
12 an expert witness for this Arbitration.

13 THE WITNESS: Thank you very much, and a good
14 day to you all.

15 PRESIDENT SIQUEIROS: Would now be a time to
16 take a break, or would you like to proceed, and if the
17 Court Reporters and Interpreters--we now have the
18 Expert Report of Mr. Baillie.

19 MR. BURN: That's Dr. Baillie, sir.

20 PRESIDENT SIQUEIROS: Dr. Baillie, of course.
21 My mistake and apologies to Dr. Baillie.

22 MR. BURN: Perhaps we could take five or ten

1 minutes, and we could resume with Dr. Baillie's
2 evidence.

3 PRESIDENT SIQUEIROS: Just also for the
4 record, although reference has already been made by
5 Mr. Leathley, today we will not have, as the Parties
6 are aware, the live feed of the Spanish transcription,
7 although the Spanish transcription is to be made and
8 will be accompanied to the Arbitration documents.

9 Thank you.

10 (Brief recess.)

11 PRESIDENT SIQUEIROS: So, if the Parties and
12 Court Reporters and Interpreters are ready, then we
13 may proceed with Dr. Baillie.

14 IAN BAILLIE, CLAIMANTS' WITNESS, CALLED

15 PRESIDENT SIQUEIROS: Dr. Baillie, good
16 morning.

17 THE WITNESS: Good morning.

18 PRESIDENT SIQUEIROS: We appreciate your
19 presence here, and as you have probably identified,
20 the process will be one where there will be, first, a
21 request on the part of counsel to Claimants for you to
22 confirm your Report.

1 You will then be in a position to make your
2 presentation, to be followed, then, by a
3 cross-examination on the part of counsel to the
4 Respondent, the Republic of Costa Rica.

5 And thereafter, if counsel to Claimants deem
6 this advisable or necessary, they will have the
7 possibility of following up with some questions from
8 the cross-examination carried out by counsel to Costa
9 Rica.

10 We would ask, as you're probably familiar,
11 that before you respond, you wait for the questions on
12 the part of the person who is making the question; and
13 if you have any questions or wish any clarification,
14 you may request that. If you wish to make any
15 comments, you may proceed to do these after you have
16 responded to the specific question that has been
17 placed to you.

18 And before we proceed, then, we would ask you
19 to read the statement that should be in front of you
20 so this is placed on the record, please.

21 THE WITNESS: I solemnly declare upon my honor
22 and conscience that my statement will be in accordance

1 with my sincere belief.

2 PRESIDENT SIQUEIROS: Thank you very much, Dr.
3 Baillie.

4 DIRECT EXAMINATION

5 BY MR. BURN:

6 Q. Good morning, Dr. Baillie. You'll be familiar
7 with this from having observed others go through the
8 process. But if you could just take the file in front
9 of you; and at the top of the documents there, you
10 should find a copy of your Soils Report dated the 31st
11 of July, 2016.

12 Could you just flick through the document--no
13 need to read it--just want you to verify that it
14 appears to be a copy of your Report, and that will go
15 back to Page 54.

16 Does that appear to be a copy of your Report?

17 A. It is my Report.

18 Q. Thank you.

19 Do you have any corrections or amendments to
20 make to the Report?

21 A. I would like just to point out, on Maps 4 and
22 6, which are on Pages--

1 Q. Is this Pages 40 and--sorry; no, not Page
2 40--17 and 30? Are those the maps to which you refer?

3 A. Yes.

4 You'll see that there are two sites numbered
5 28.

6 Q. Uh-huh.

7 A. The second site should be numbered "26."

8 Q. Okay.

9 A. This will then accord with my Appendix A, the
10 data.

11 Q. Understood.

12 So, that amendment should be made in Figure 4
13 on Page 17 and Figure 6 on Page 30; is that right?

14 A. That is right.

15 Q. Thank you.

16 No other changes to make?

17 A. No.

18 Q. Could you just look at Page 54.

19 A. Yes. I have it.

20 Q. Is that your signature?

21 A. That is my signature.

22 MR. BURN: Thank you very much. I'll hand it

1 over to you at this point, and you can give to the
2 Tribunal your presentation. Hard copies of slides are
3 already with the Arbitrators.

4 Once all of that is done, Mr. Leathley will
5 have questions for you. I may have questions after
6 that, but at any point in time, the Arbitrators may
7 intervene with questions.

8 Your obligation is very simple: To answer all
9 questions put by whomever to the best of your ability;
10 is that clear?

11 THE WITNESS: That is clear.

12 MR. BURN: Thank you, Dr. Baillie.

13 DIRECT PRESENTATION

14 THE WITNESS: Mr. Burn has asked me to be very
15 quick with my presentation because of the time
16 constraints of the day. So, I will only highlight the
17 main points.

18 And my presentation is not about my main
19 Report, which is available, and everyone has seen, I
20 assume; but is to two points I would like to try and
21 highlight with my supplementary. One is, some of the
22 terminology used for poorly drained and--soils and

1 soils with impeded drainage.

2 So, if we go through--I'm not quite sure how
3 you work the--

4 MR. BURN: My colleague to my left has
5 control.

6 THE WITNESS: Okay. Sorry.

7 MR. BURN: So, if you just nod, they will
8 move.

9 THE WITNESS: Right.

10 Well, just basically, the way that we can tell
11 if a soil is freely or poorly drained is primarily by
12 color; and the color is determined by the state of the
13 iron in the soil. And if the iron is in its ferric
14 form, it gives brown, red, and yellow colors. And
15 when we see those colors, they indicate free drainage.

16 When a soil is poorly drained and lacking in
17 oxygen, the soil colors are predominately gray.

18 Soils which--in which the morphology of the
19 soil has been primarily determined by excess water are
20 referred to as "hydromorphic soils."

21 "Hydromorphic" is a general term that has been
22 in use for at least a century. My first finding of

1 the use of the word in English is from 1914.

2 And within the hydromorphic soils, there are
3 those that are truly impeded and really poorly
4 drained, which are gray throughout, and these are
5 referred to as "gley soils."

6 Those which have intermittently poor drainage
7 will tend to be gray at depth, but in the upper
8 layers, they may be alternately gray and red. Some
9 parts are well-drained, some parts are poorly drained,
10 and it gives this very characteristic mottled
11 appearance.

12 Hydric soils is a term that was only
13 introduced in the 1970s. It long postdates
14 hydromorphic soils and it is used in a very specific
15 way, and it is only for the very wettest of the
16 hydromorphic soils. So, "hydromorphic" is a general
17 term; "hydric" is a defined subset.

18 And the criteria--the rules for what is hydric
19 and not vary from--across the world; but basically,
20 the hydric soils have to be gleyed, i.e., grey colors
21 predominant, grey matrix, up to very close to the soil
22 surface.

1 There are basically two types of hydric soils.
2 There are those which are formed by groundwater, where
3 the water rises up from depth and gets very close to
4 the surface, and these are referred to as "endoaquic"
5 in the soil taxonomy, which is from the USDA but
6 defined--used in Costa Rica.

7 And there are those which are gleyed on the
8 surface, where the water is held up by an impermeable
9 layer but are better-drained underneath. So, the
10 subsoil is less gleyed, and these are surface water
11 gleys or parched water table, and in the terminology
12 of the soil taxonomy, they are called epiaquic.

13 In the low-lying areas of the Las Olas site, I
14 found basically hydric soils of the second type, i.e.,
15 the parched water table, surface water gley type. I
16 did not find any existing current hydric soils of the
17 endoaquic type.

18 So, looking at the slide there, it's the soils
19 on the right-hand side which are characteristic of
20 those few areas of hydric soils within the Las Olas
21 site--sorry, I'll get this right--Las Olas. Sorry.

22 The other point I would like to make in my

1 supplementary, there has been queries about the use of
2 the Costa Rican land evaluation system for identifying
3 hydric soils in Costa Rica. And there's been
4 suggestions that it might not be a scientific system.

5 It is, in fact, a very well-proven system. It
6 dates and has been adapted from USDA Handbook 210 from
7 1961. And this has been tested and found to be very
8 robust, flexible, and satisfactory in a large number
9 of countries, including in the tropics. And I have
10 here examples of its use in New Zealand, Ontario. I
11 have used it in Thailand, Tanzania, Malaysia, and
12 Nigeria, amongst other countries.

13 It is designed to assist very general planning
14 of the use of land within the Agroforestral Sector.
15 So, it's primarily aimed at determining whether land
16 is best-suited for arable, pasture, or production
17 forestry, or should be left for conservation purposes.

18 And the rank--the classes are ranked I through
19 VIII, from intensive arable through to Class VIII,
20 wilderness conservation, do not touch.

21 It works on the principle of limiting factors,
22 so, Class I has no limits. It's the best possible

1 land. No need to qualify it. But all the other
2 classes, you have to indicate what is the limiting
3 factor.

4 And so, in the example I've given, piece of
5 land has been classed as Class IV, Class IVE, to
6 indicate that there is a potential erosion hazard and
7 erosion is the major constraint.

8 Now, the reason why it is a useful system for
9 identifying hydric soils is because drainage is one of
10 the major potential limitations and is used in the
11 land evaluation system; and they are well-defined,
12 quantitative criteria so that you can apply these to
13 specific soils and be clear what it is that you are
14 defining. These are not general terms; they are
15 specific about depths and kind of features that are
16 present.

17 The value of this quantitative-specific set of
18 criteria were recognized in the MINAE Decree of 85803
19 [sic], and it is stated there that "Hydric soils, for
20 the purpose of definition of wetlands, are
21 a--correspond to land evaluation Classes VII and
22 VIII."

1 And the correspondence is noted in Article Vb.

2 This explains the crucial role of INTA in the
3 identification of hydric soils; and therefore, in the
4 delineation and designation of wetlands, because as
5 far as I can tell, only INTA, amongst all the
6 Government agencies, has the necessary expertise to
7 identify and apply the classification of the land
8 classification system, and therefore, unequivocally
9 identify hydric soils.

10 And so, INTA is important within this case,
11 but it is also important generally, as indicated in
12 the Respondent's Rejoinder Memorial, Paragraph 381,
13 where they specifically mentioned the crucial role of
14 INTA in helping the National Program for "Humedales,"
15 for wetlands, in identification and designation.

16 That's my main supplementaries, and I will
17 stop now, because my Report and--I know that the
18 Tribunal is running against time constraints today.

19 MR. BURN: Dr. Baillie, just one clarification
20 question.

21 I assume when we look at Page 1660, lines 21
22 and 22 in the LiveNote, when you say "MINAE Decree

1 85803," you meant to say, "MINAE Decree 35803."

2 THE WITNESS: You are correct. I'm sorry, I
3 got that wrong. Yes, it is the main MINAE wetlands
4 decree.

5 MR. BURN: Thank you.

6 PRESIDENT SIQUEIROS: Mr. Leathley or
7 Ms. Paez?

8 CROSS-EXAMINATION

9 BY MS. PAEZ:

10 Q. Good morning, Dr. Baillie.

11 A. Good morning.

12 Q. I'll be asking you some questions in your
13 Report.

14 Dr. Baillie, you're based in the UK; right?

15 A. Yes.

16 Q. And in the first page attached to your CV, you
17 do not list the Spanish as part of the languages you
18 speak; correct?

19 A. That is correct.

20 Q. So, you do not speak or read Spanish; correct?

21 A. I do not speak Spanish. I do not read general
22 Spanish, but I can read soils-related technical

1 Spanish.

2 Q. Thank you.

3 Dr. Baillie, on your survey into the Las Olas
4 site, you took photos of your--of the survey you
5 carried out; correct?

6 A. Photos were taken. I would just clarify that
7 when you're doing a soils survey, your hands get
8 extremely muddy. So, I actually handed my camera to
9 either a driver or a laborer who was with me. So,
10 photographs were taken; I didn't take them.

11 Q. And you made a record of every auger hole that
12 you surveyed; right?

13 A. Yes. That is in my Appendix A.

14 Q. And--yeah. As you say, you documented all of
15 this information in your Report; correct?

16 A. Well, I--I wrote a Report based on my
17 information.

18 Q. So, yeah, you would say that all the relevant
19 information is contained in your Report.

20 A. I hope so.

21 Q. Thank you.

22 Dr. Baillie, you've carried out soils surveys

1 in many countries around the world; correct?

2 A. Correct.

3 Q. But isn't it correct that you had no
4 experience in Costa Rica prior to this project?

5 A. I have worked in Panama several times and
6 Belize. I was in Belize about eight or nine times
7 over a period of almost a decade.

8 Q. But not Costa Rica; right?

9 A. Not in Costa Rica, no.

10 Q. And for the preparation of your Report, you
11 did not meet with Costa Rican specialists; correct?

12 A. I did go to INTA with Mr. Raul Guevara, and I
13 had discussions with Dr. Cubero.

14 Q. Okay. Because that was not disclosed in any
15 page of your report.

16 A. That is correct. I did not disclose that.
17 Could I add a clarification to that last
18 point?

19 Q. No--no, don't worry.

20 You do make a--conclusions relating to--

21 PRESIDENT SIQUEIROS: Your--excuse me. Dr.
22 Baillie, your counsel, Mr. Burn, may and will surely

1 ask some questions of you as a follow-up on this
2 point, I'm sure.

3 THE WITNESS: Right. I understand.

4 BY MS. PAEZ:

5 Q. Dr. Baillie, you do make some conclusions
6 relating to Costa Rican regulations in your Report;
7 correct?

8 A. Yes.

9 Q. For example, in Paragraph 15 of your Report,
10 you conclude that: "Under the Costa Rican definition
11 of a wetland, the presence of three criteria is
12 required."

13 Correct?

14 A. Correct.

15 Q. You also undertook your survey using the Costa
16 Rican Land Evaluation methodology; correct?

17 A. Which paragraph are you referring to?

18 Q. Paragraph 36 of your Report.

19 A. Oh.

20 Q. You say in Paragraph 36 that "A Class VII soil
21 is required to be a hydric soil in Costa Rica."

22 Correct?

1 A. No, that is--Class VII can also be Class VII
2 based on land slope, erodibility. It would have to be
3 a Class VIIId to be hydric.

4 Q. Yes, but I'm reading the last sentence of
5 Paragraph 36 of your Report, which says: "The valley
6 did not qualify for the Costa Rican definition of
7 'hydric,' which requires the land meet the definitions
8 of CRLE Class VII or VIII."

9 A. Yes, that is correct.

10 Q. Thank you.

11 You did not conduct any laboratory
12 studies--the samples that you make on that date;
13 correct?

14 A. That is correct, because there are no chemical
15 criteria in the definition of "hydric soils." So,
16 therefore, chemical analysis is not relevant to the
17 definition or the identification.

18 Q. But are you aware that under the CRLE
19 methodology, laboratory analyses are required to
20 conduct a survey under that methodology?

21 A. CRLE and identification of Class VII would
22 require chemical analysis if we were

1 being--classifying them according to nutrient
2 fertility, but we are--the hydric soils are classified
3 according to drainage constraints, which require no
4 laboratory analyses.

5 Q. Thank you.

6 Dr. Baillie, in Paragraph 29 of your report,
7 you make another conclusion of Costa Rican law, and
8 you say that the USDA soil taxonomy is the official
9 soil classification system of Costa Rica; correct?

10 A. Correct.

11 Q. Was this told to you by Mr. Cubero?

12 A. And from his written reports.

13 Q. How many written reports did you review from
14 Mr. Cubero?

15 A. I only reviewed the report of the Las Olas.

16 Q. So, it's one report.

17 A. Yes.

18 Q. So, Dr. Baillie, you've explained today that
19 you make a distinction between hydromorphic soils and
20 hydric soils.

21 A. Correct.

22 Q. And in Paragraph 19 and 20 of your Report, you

1 describe the main characteristics of hydromorphic
2 soils; right?

3 A. Correct.

4 Q. You mention "anaerobic conditions." Correct?

5 A. Correct.

6 Q. Can you please describe "anaerobic
7 conditions"?

8 A. "Anaerobic conditions" are whereby biological
9 and chemical processes take place in conditions of
10 restricted oxygen supply.

11 Q. Thank you.

12 And in Paragraph 20, you also refer to gleying
13 and mottling as part of those characteristics;
14 correct?

15 A. They are the morphological results of soil
16 processes that take place in anaerobic conditions.

17 Q. So, they are also the main characteristics of
18 hydromorphic soils.

19 A. They are important characteristics. They are
20 not necessarily the only ones.

21 Q. That leads me to the next question: Are these
22 the only hydromorphic indicators in evaluating wetland

1 soils?

2 A. No. The other one--there are two other main
3 sets of characteristics. One is the presence of
4 sulfites. But this doesn't apply at Las Olas, because
5 we do not have a sulfur--a sulfur-bearing substrate
6 for the--that would enable the development of
7 sulfites.

8 The other is the thickness and wetness of the
9 organic layer on the topsoil, the epipedon zone.

10 Q. Thank you.

11 And you also differentiate imperfectly drained
12 soils from poorly drained soils; correct?

13 A. Correct.

14 Q. And you say that "Because imperfectly drained
15 soils may be intermittently saturated for short
16 periods, they do not qualify as hydric."

17 A. That is correct.

18 Q. Thank you.

19 And you state on the other side that
20 "Imperfectly drained soils which may be intermittently
21 saturated for short periods and briefly have standing
22 water after floods are not hydric."

1 A. Could you explain--what paragraph are we in?

2 Q. 21.

3 A. 21. Okay.

4 Sorry. Could you now repeat your question?

5 Q. Imperfectly drained soils, according to you,
6 which are intermittently saturated for short periods
7 and briefly have standing water after floods are not
8 hydric but can be--and can be used for pastures and
9 forestry.

10 Right?

11 A. That is correct.

12 Q. And poorly drained soils have standing water
13 for long periods, and so, they are indeed hydric
14 soils; correct?

15 A. Yes, in general. There may be slight
16 variations between them, but as a general
17 correspondence, that would serve.

18 Q. Dr. Baillie, please go to Tab 1 of the binder.
19 I'm taking you to Exhibit C-218. We have a
20 translation of the MINAE Decree 350803 [sic].

21 I'm going to read the--Article Vc, which
22 refers to the hydric condition of wetlands.

1 Do you see that?

2 "All wetlands usually have at least one season
3 with an abundance of water. This can be caused by
4 precipitation, unusual floods, surface runoff due to
5 precipitation, groundwater discharges, or tides. The
6 frequency and duration of flooding and soil saturation
7 varies widely, from permanently inundated or saturated
8 to irregularly flooded."

9 Dr. Baillie, does this parameter require
10 nearly permanent flooding?

11 A. I have to say that I did not judge hydric
12 conditions. I judged hydric soils, which is a
13 different criteria for wetlands.

14 Q. But the article does not require permanent
15 flooding; correct? The article we just read.

16 A. Correct.

17 Q. Thank you.

18 In Paragraph 20 of your report, you identify
19 soil mottle as approximately synonymous with
20 redoximorphic features in soil taxonomy; right?

21 A. Approximately, yes.

22 Q. And in the same paragraph of the report, you

1 do also present the argument that these reduced soils
2 with a strong mottled appearance develop under an
3 intermediate state of hydromorphic soil development
4 associated with imperfectly drained soils; correct?

5 A. Which paragraph are you referring to now?

6 Q. The same Paragraph 20.

7 A. Same paragraph, okay.

8 Right and you--sorry. Your question is?

9 Q. Yes. So, this is the basis--one of the bases
10 for you to classify--you have already explained it to
11 us--imperfectly drained soils from poorly drained
12 soils; correct?

13 A. Yes.

14 Q. Now, if we can please go again to Tab 1, which
15 is C-218. And if we can go to the definition of
16 hydric soil under the MINAE decree?

17 A. So, this is Article 5, para (b), is it?

18 Q. Yes.

19 A. Okay.

20 Q. I'm going to read it for you.

21 "Hydric soil or hydromorphic soil is
22 designated as that which, in its natural conditions,

1 is saturated, flooded, or dammed with water, or dammed
2 over a long period that permits for the development of
3 anaerobic conditions in its upper sections."

4 Dr. Baillie, this article does not make a
5 distinction between hydric and hydromorphic soils;
6 correct?

7 A. Yes. And that--I find that confusing.

8 Q. But this is the state of Costa Rican law;
9 correct?

10 A. Correct.

11 Q. And could we go to the next section--to the
12 next paragraph of Article 5(b) which says, "Based on
13 the classification of usability of lands, usually
14 wetland soils correspond to Class 7 and 8."

15 Do you see that?

16 A. I see that.

17 Q. The report then--sorry. The decree does not
18 say a Class 7 is required to be hydric soil; correct?

19 A. I would agree. As I've earlier explained, a
20 Class 7 soil can be on a steep mountain slope or it
21 can be a rocky soil. So, Class 7 is not always
22 hydric.

1 Q. Thank you.

2 A. A Class 7(d) would normally be hydric.

3 Q. Thank you.

4 Dr. Baillie, in making the distinction between
5 hydric and hydromorphic soils, did you review the
6 Ramsar Convention's definition of a wetland?

7 A. I did look at it. Yes, I did.

8 Q. In making this distinction between hydric and
9 hydromorphic soils, did you review the Ramsar
10 Convention's definition of "wetland"?

11 A. Not of "wetland," no. I only looked at hydric
12 soils.

13 Q. Let's go to the Ramsar Convention, please.
14 This is in Tab 3 of your folder. For the record, it
15 is RLA-41. And if you could locate Article 1.1.

16 A. This is on page--the first page?

17 Q. Yes. So, Article 1--

18 A. Yeah. Okay.

19 Q. --"For the purpose of this Convention,
20 wetlands are areas of marsh, fen, peatland or water,
21 whether natural or artificial, permanent or temporary,
22 with water that is static or flowing, fresh, brackish

1 or salt, including areas of marine water, the depth of
2 which at low tide does not exceed 6 meters."

3 Dr. Baillie, did the Convention mention
4 permanent or temporary water; correct?

5 A. Yes.

6 Q. Now, if we could go back again to Tab 1 to
7 Exhibit C-218, Article 7 reflects the classification
8 of wetlands under the Ramsar Convention.

9 A. Here we are. Got it.

10 Q. Yes. So, I'm just going to read some of the
11 classifications--some of the wetlands types that are
12 enumerated in Article 7. Article 7(a) says--mentions
13 as a type of wetland fluvial systems; correct?

14 A. Yes.

15 Q. And it also mentions as a type of fluvial
16 system intermittent streams. You see that?

17 A. Yes.

18 Q. Intermittent streams then are protected types
19 of wetlands under the Ramsar Convention; correct?

20 A. Some. I wouldn't say all.

21 Q. The distinction is not making--sorry--the
22 decree is not making that distinction of all or some;

1 correct? It just enumerates them?

2 A. That's what this document says, yes.

3 Q. Thank you. And Article 7(d) lists as other
4 types of wetlands lacustrine systems; correct?

5 A. Correct.

6 Q. And as a type of lacustrine system,
7 it's--Article 7(d) mentions intermittent freshwater
8 lakes as a protected wetland; correct?

9 A. Yes.

10 Q. Let's go to Article 7(e) which lists
11 palustrine systems. A type of palustrine system that
12 is a protected wetland is intermittent freshwater
13 marshes, estuaries, and ponds; correct?

14 A. Yes.

15 Q. And it also mentions seasonally flooded
16 forests, correct?

17 A. Yes.

18 Q. And, Dr. Baillie, you agree that all of these
19 types of wetlands would be intermittently flooded as
20 per their definition; correct?

21 A. Yes.

22 Q. So, not all--isn't it--isn't it true that all

1 of these type of wetlands would have short hydric
2 periods?

3 A. They would have intermittently hydric
4 conditions, but they would not have hydric soils.

5 Q. Because they would not be flooded for a
6 permanent--

7 A. The water wouldn't be there for long enough
8 during the year for hydric soil conditions to develop.

9 Q. But all of these wetlands are protected under
10 Article 7 anyways; correct?

11 A. My understanding in Costa Rica is that the
12 wetland has to have hydric soils.

13 Q. Dr. Baillie, in Paragraph 72 of your report,
14 you say that the CRLE classes are used in Costa Rica
15 as an aid in the identification of hydric soils;
16 right?

17 A. Yes.

18 Q. As an aid to what, Dr. Baillie?

19 A. The problem with the decree is that the
20 definitions of hydric soils are qualitative and
21 general. They--they are useful definitions in law,
22 I've no doubt, but they are not useful in the field

1 for the field scientist who has to identify hydric
2 soils. He needs much more specific indicators of
3 whether a soil is hydric or not.

4 And the only Costa Rican methodology that I
5 could find is the land evaluation system, and I used
6 it because it had been validated by inclusion into the
7 decree.

8 Q. So, you agree with me from what I just
9 understood that you cannot find hydric soils
10 indicators in the CRLE; right?

11 A. The CRLE drainage criteria are useful
12 indicators of hydric soils.

13 Q. But the CRLE does not call them hydric
14 indicators.

15 A. The CRLE is quite a document of some standing.
16 It's been in place since 1988. And this is in the
17 very early aid stages of the development of the hydric
18 soil concept in the world.

19 So, they would not specifically mention hydric
20 soils. Also, CRLE are--as I mentioned earlier, are
21 designed to aid planning in the agroforestral
22 sections. They are not specifically aimed at

1 identifying hydric soils. But they are the only
2 useful practicable ones in Costa Rica.

3 Q. So, to answer my question, you wouldn't be
4 able to find hydric indicators in the CRLE?

5 A. They're not mentioned.

6 Q. Dr. Baillie, you would agree with me that,
7 then, the CRLE is not the correct instrument to
8 identify hydric soils in Costa Rica?

9 A. It is the only practicable instrument.

10 Q. But you would--you wouldn't say it's the
11 correct instrument; right?

12 A. As it is the only practical one, it has to be
13 the correct one.

14 Q. In Paragraph 29 of your report, you say that
15 the USDA Soil Taxonomy and not the CRLE is the
16 official soil classification system in--of Costa Rica;
17 correct?

18 A. Correct.

19 Q. Is this another of the conclusions of
20 Mr. Cubero?

21 A. I didn't specifically ask him. I can see from
22 the literature that the Costa Rican soil science

1 community uses the USDA as evidenced also in the Green
2 Roots Report. They also use--because this is,
3 obviously, standard practice in Costa Rica.

4 Q. Dr. Baillie, for the preparation of your
5 report, you did not carry out your survey. You say
6 the USDA field indicators of hydric soils methodology
7 of the USDA; correct?

8 A. Correct. I did consider it as is shown in my
9 references.

10 Q. By the--yes.

11 Dr. Baillie, are you aware that under the USDA
12 field indicators of hydric soils methodology, to be
13 identified as hydric, a soil should generally have one
14 or more indicators?

15 A. Yes.

16 Q. So, if one of the indicators is present, then
17 we have a hydric soil according to that methodology?

18 A. Yes.

19 Q. And, Dr. Baillie, if we go to Paragraph 76 of
20 your report, you agree with INTA's findings that there
21 are currently no hydric soils in Bajo 1, also known as
22 KECE Wetland 1; correct?

1 A. Correct.

2 Q. And, Dr. Baillie, I guess you reviewed the
3 INTA report from May 2011.

4 A. Yes.

5 Q. Did you review an English translation of that
6 report?

7 A. No, I read it in Spanish. As I say, I can
8 read technical soil-related Spanish.

9 Q. Well, we have provided a translation of the
10 report. So, if you could go to Tab 4, please.

11 So, you agree with me that Mr. Cubero
12 concluded that the soils were not hydric because they
13 fell under Category 5 rather than Category 7 or 8;
14 correct?

15 A. Correct.

16 Q. But Dr. Cubero does mention hydric soil
17 indicators in his report, doesn't he?

18 A. Whereabouts?

19 Q. For example, paragraph 2 of his conclusions he
20 mentions, and I quote, "anaerobic processes are
21 evident."

22 A. I would agree that there--anaerobic processes

1 also take place in imperfectly drained soils, and I do
2 not see any mention of hydric soils in that paragraph.

3 Q. But he does refer to anaerobic processes;
4 correct?

5 A. Correct.

6 Q. And he also refers to gleyed soils; correct?

7 A. Correct.

8 Q. And he mentions that the--those processes
9 increase with the depth. Still at Paragraph 2 of--

10 A. Correct.

11 Q. --of the INTA report.

12 So, anaerobic conditions and gleyed soils,
13 according to you, are hydromorphic soils indicators?

14 A. Correct.

15 Q. But not necessarily hydric soil indicators?

16 A. Not necessarily hydric.

17 Q. And the INTA report concluded that the soils
18 could not be hydric because it conducted its study
19 under the CRLE methodology?

20 A. Correct.

21 Q. And you did the same; correct?

22 A. Correct.

1 Q. And, Dr. Baillie, could you please go to
2 Exhibit 401. This is the--the CRLE.

3 A. 401. Where is 401?

4 Q. Tab 2.

5 A. Tab 2. All right.

6 Q. Are the hydromorphic soil indicators evaluated
7 in the CRLE the same as all the criteria you
8 identified in Paragraph 20 of your report?

9 A. Sorry. Could you rephrase that question in a
10 more specific way?

11 Q. Are the hydromorphic soil indicators evaluated
12 in the CRLE the same as the criteria you identified as
13 hydromorphic soil indicators in Paragraph 20 of your
14 report?

15 A. If we go to Page 13 of the methodology--and
16 you can see that in Section 5 where it says "Slow"
17 which is the definition of Class 5 in CRLE. "DL" is
18 the classification, so it's "drenaje lento." Water is
19 eliminated from the soil to keep it saturated for
20 appreciable periods. Soils with slow drainage usually
21 have a high water table, between 30 and 60 centimeters
22 deep, with mottling at less than 30 centimeters and

1 gleyed layers in the subsoil.

2 So, that does correspond with two of the three
3 sets of indicators I put in my Paragraph 20. It
4 doesn't mention the organic topsoil.

5 Q. Thank you. Dr. Baillie, for the--for the
6 auger holes and mini pits that you surveyed on Bajo 1,
7 you found that the mini pits 13, 28, and 28 were
8 imperfectly poorly drained. This is in Figure 4 of
9 your report.

10 A. Sorry. Could you repeat the numbers.

11 Q. Figure 4 of your report.

12 A. Okay.

13 Q. Mini Pits 13, 28 and 28.

14 A. Yeah. I would just say that that 28 is the
15 wrong one, unfortunately.

16 Q. Yes, 28 and 28.

17 A. It's actually--no, it's right. Sorry. It is
18 28. That's the right one, yeah. It's the other one
19 that's wrong.

20 Q. So, you found that this soil--you classified
21 the soils--you found gleyed at depth--

22 A. Yes.

1 Q. --but you classified them as marginally
2 hydric; correct?

3 A. Yes, they are not currently hydric. They are
4 Class 5. But the question is would they be hydric if
5 we discounted the potential fill--the alleged fill.

6 Q. And marginally hydric does not appear in the
7 MINAE Decree 3503; correct?

8 A. The reason I use the word "marginally" is
9 because it depends on the thickness of fill.

10 So, this is very specific to this site. And I
11 use the word "marginally" to assist discussion of this
12 particular case and this particular site. So, it does
13 not appear in the general--generalized categories.

14 Q. It doesn't appear also in the USDA Soil
15 Taxonomy that you used; correct?

16 A. I'm not aware. Does the U.S. Soil Taxonomy
17 refer to hydric soils at all?

18 Q. I'm asking the question, sir.

19 A. Well, no. I mean, I can't answer because I
20 don't know that the word "hydric" ever appears in
21 terms of classification in U.S. Soil Taxonomy.

22 Q. Does the "marginally hydric" appear under the

1 CRLE?

2 A. No.

3 Q. And it also does not appear under the field
4 indicators of hydric soils of the USDA; correct?

5 A. Correct.

6 Q. So, as you have said, marginally hydric was
7 the sole product of your personal interpretation for
8 the Las Olas site; correct?

9 A. Specifically to address the question of
10 potential alteration of hydric soils in that Bajo.

11 Q. We'll get to the fill.

12 Could you please--are you--Dr. Baillie, are
13 you familiarized with the precautionary principle?

14 A. I know it in general terms.

15 Q. Please go to Tab 6. Sorry. It's not in the
16 binder, but we can pull it out on the screen. The
17 title of this article reads, "Prevention, Precaution,
18 Logic and Law. The relationship between the
19 precautionary principle and the preventative principle
20 in international law and associated questions."

21 MR. BURN: Sorry. Could you just confirm the
22 exhibit number for that.

1 MS. PAEZ: RLA-74.

2 MR. BURN: I'm grateful.

3 BY MS. PAEZ:

4 Q. Dr. Baillie, would you agree that this article
5 deals with the precautionary principles just by
6 looking at the title?

7 A. I have never seen this article before. But,
8 yes, that's what the title says.

9 Q. Thank you. And we'll go to the first
10 page--the first paragraph of Page 108 of the article.

11 MR. BURN: Sir, I have to query the merit of
12 taking a witness to an article from a Law Review that
13 he confirms he's not read before and taking him to
14 selected parts in this context.

15 PRESIDENT SIQUEIROS: I think that is a fair
16 point.

17 MS. PAEZ: I would propose maybe just posing
18 the question to the witness. And then if he's not
19 happy answering, then--just a question about the
20 precautionary principle.

21 MR. BURN: But, again, it's taking things out
22 of context. I mean, who knows--how can the witness

1 give an answer to that narrow question without
2 appreciating what appears in the article overall?

3 PRESIDENT SIQUEIROS: Indeed. But if--if the
4 question is presented and the witness has no problem
5 answering it, let's proceed.

6 But in the inverse, you will understand why we
7 cannot place a document in front of the witness which
8 he has not previously reviewed, has confirmed he has
9 not reviewed previously, and relates to a document in
10 a Law Review.

11 BY MS. PAEZ:

12 Q. Dr. Baillie, I'm just going to read some
13 sentences of this article that speaks about the
14 precautionary principle.

15 And it reads: "Generally speaking, the
16 precautionary principle calls for action at an early
17 stage to response to threats of environmental harm,
18 including in situations of scientific uncertainty.
19 Applying the principle means giving the benefit of the
20 doubt to the environment: *in dubio pro natura*."

21 I wanted to ask if you agree with me that if
22 the soil that you found to be marginally hydric was to

1 be classified as hydric in light of this principle, it
2 would be protected.

3 A. Could you repeat that, please.

4 Q. Sure.

5 A. Don't read it out again.

6 Q. Yeah. So, I'm going to read my question.

7 Would you agree with me that if the soil that
8 you found to be marginally hydric was to be classified
9 as hydric in light of this principle, it would be a
10 protected soil?

11 A. Yes.

12 Q. Thank you.

13 Now, Dr. Baillie, I would like to talk to you
14 about the refill of Wetland 1. So, when you went to
15 the site, you knew there was a fill covering the
16 native soil; correct?

17 A. I had heard this.

18 Q. And you estimated that the fill that was of 40
19 to 50 centimeters; correct?

20 A. As I had been told by local people.

21 Q. And apart from local people, you also relied
22 on a video shot by Mr. Jovan Damjanac; correct?

1 A. Not mainly, no. I did see some
2 discontinuities in a couple of my profiles at about
3 that depth.

4 Q. Yeah. No, I didn't say you mainly relied on
5 the video. I just said you also relied on that video;
6 correct?

7 A. It was corroborative.

8 Q. And, Dr. Baillie, do you know if Mr. Damjanac
9 has any technical expertise or qualifications?

10 A. I didn't rely on his opinions. I only relied
11 on the visual evidence on the video.

12 Q. And the video was recorded in a hand-held
13 camera; correct?

14 A. Correct.

15 Q. And you had no--

16 A. No. Sorry. I don't know. I don't know how
17 it was held--I don't know how it was taken.

18 Q. You had no direct control over the recording
19 of that video; correct?

20 A. Correct.

21 Q. And the video does not show any measurement of
22 the depth of each bore hole?

1 A. I could see from visual context approximate
2 depths.

3 Q. But it did not show a measurement of the
4 depth?

5 A. No.

6 Q. And the video was made in the month of
7 May 2011; correct?

8 A. Correct.

9 Q. Are you aware that this video was made more
10 than two years following the first project filling of
11 the area?

12 A. No, I don't know the chronology.

13 Q. You did not review aerial photography to reach
14 your determination of the depth fill, do you?

15 A. No.

16 Q. And you also did not review the municipality
17 reports documenting the start of works on April 2008;
18 correct?

19 A. No, I did not.

20 Q. And you did not review the Claimants'
21 construction logs for the works that were done on the
22 site; correct?

1 A. I did look at the construct--the contractor's
2 estimates of the volumes of material that would be
3 involved in earth moving.

4 Q. Would that be part of the local hearsay you
5 refer to in your report?

6 A. No. That is a document that I've seen since
7 then.

8 Q. But it was not referred to in your report;
9 correct?

10 A. No.

11 Q. Thank you.

12 Dr. Baillie, you do acknowledge that the
13 Claimants carried out development works in Bajo 1;
14 right?

15 A. That is quite clear. They did.

16 Q. And in Paragraph 56 of your report you mention
17 that the Claimants engaged in the excavation of a
18 drainage ditch; correct?

19 A. Correct.

20 Q. And in the same paragraph, the construction of
21 a house also on Bajo 1; right?

22 A. A house was constructed. I'm not sure who

1 constructed it.

2 Q. Yeah. I'm not--I'm just saying that you
3 acknowledge that a house was constructed; correct?

4 A. Correct.

5 Q. And you also say that the project development
6 works involve the construction of the terrace of the
7 house; correct?

8 A. Correct.

9 Q. And you also point to fill from adjacent hill
10 slopes; right?

11 A. Yes.

12 Q. And you considered all of these works in order
13 to determine the field depth?

14 A. I determined field depth from local hearsay
15 and from my own observations in soil auguries.

16 Q. Thank you.

17 And, Dr. Baillie, have you reviewed
18 the--sorry. Before. And you determined that fill to
19 be between 40 to 50 centimeters?

20 A. That is my estimate.

21 Q. Dr. Baillie, have you reviewed the Green Roots
22 Report?

1 A. I have.

2 Q. And did you see that they found hydric soils
3 at 105 centimeters of depth?

4 A. They found gleyed material at 105 centimeters.

5 Q. And you did not drill to that depth; correct?

6 A. No, I didn't feel any need to.

7 Q. If you had drilled until the depth, would you
8 have found the same results?

9 A. I can't say.

10 Q. Dr. Baillie, let's go back to the MINAE
11 decree. This is in Tab 1, Article 5(b) relating to
12 the definition of hydric soils.

13 And I just want to--I've already read this
14 definition into the record, but I just wanted to
15 confirm with you that the definition of hydric soil
16 under the Article 5(b) refers to the natural
17 conditions of the soil; correct?

18 A. Correct.

19 Q. You have already agreed that--or told us that
20 there were development works that distort those
21 natural conditions of Bajo 1--of the soil in Bajo 1?

22 A. There had been development works and,

1 therefore, there were effects on soils.

2 Q. So, those development works would have
3 affected the natural conditions of the soil; correct?

4 A. Correct.

5 Q. And the--Article 5(b) requires the soil survey
6 to be done in the natural conditions of the soil;
7 correct?

8 A. Yes. But, I mean, I wasn't there, so . . .

9 Q. Would you say you identified the native soil
10 below the depth--the fill?

11 A. I think so, yes.

12 Q. So, you--according to you, you did identify
13 those natural conditions required by Costa Rican law?

14 A. I would refer to my Observation Number 14
15 because there I went across the road off-site, and I
16 examined the soil in an area that could not have been
17 affected by the project works. And so, therefore, I
18 did feel that by examining that soil and comparing it
19 with what I'd seen on the projects area on Bajo 1, I
20 had a good idea of what the natural soil conditions
21 were.

22 Q. Thank you. Dr. Baillie, please go to

1 Paragraph 64 of your report. And you say, "If there
2 has been some anthropogenic soil modification from
3 hydric to nonhydric, the area involved is small."

4 A. If, yes.

5 Q. In this paragraph are you referring to a
6 potential impact of the--to the original hydric soils
7 on the site?

8 A. I'm not saying there were original hydric
9 soils on the site.

10 Q. But you say, "soil modification from hydric to
11 nonhydric."

12 A. If they were hydric soils, they would have
13 been modified. But I'm not saying there were hydric
14 soils.

15 Q. But if they were and if that was a soil
16 modification, it would be an impact to the original
17 hydric soils; correct?

18 A. Correct.

19 Q. And you say that the area involved would be
20 small anyways?

21 A. Yes.

22 Q. And let's assume that all of the criteria for

1 it to be a wetland are also--are also met here in this
2 specific paragraph that you made--that we're
3 discussing. This impact to the soil would also mean
4 an impact to a wetland; correct?

5 A. As long as the other criteria for a wetland
6 were also present, yes.

7 Q. And are you aware that impacting a wetland is
8 a criminal offense in Costa Rica?

9 A. I am.

10 Q. You don't?

11 A. I am. I am aware.

12 Q. Thank you. So, Dr. Baillie, we can go to Tab
13 9 page 23. This is Exhibit R-404. This is the
14 criminal offense for draining of a wetland in Costa
15 Rica. And I'm just going to read Article 98 of the
16 Wildlife Conservation Law which says, "Any person who
17 drains, dries, fills or removes lakes, nonartificial
18 lagoons, and other wetlands, whether declared or not
19 as such, without the previous authorization by the
20 National System of Conservation areas, shall be
21 punished with a prison sentence of 1 to 3 years."

22 This is the provision that refers to the

1 impact--to the criminal offense of impacting a
2 wetland. Do you see that?

3 A. I see that.

4 MS. PAEZ: Thank you. I don't have any
5 further questions.

6 PRESIDENT SIQUEIROS: Mr. Burn.

7 REDIRECT EXAMINATION

8 BY MR. BURN:

9 Q. Just a couple of questions, Dr. Baillie.

10 You'll recall that early on in Ms. Paez's
11 cross-examination, you made reference to discussions
12 with Dr. Cubero at INTA.

13 You indicated you wanted to have the
14 opportunity to expand on the answer you were able to
15 give at the time. Would you like to give the Tribunal
16 a fuller version of what was discussed there and
17 describe any relevant information that you found
18 during those discussions?

19 A. Yes. I would just like to say that wherever I
20 work--any country I go to, I always make a point of
21 visiting the local soil scientists and local soil
22 survey organization, partly out of courtesy and partly

1 also to pick their brains. Because I don't know local
2 conditions. I know soils in general and I know soils
3 from other areas, but I want to find out the local
4 peculiarities. I also wanted to talk to Dr. Cubero
5 because I wanted to be clear that I had understood his
6 report properly.

7 I mean, I had his report. I'd seen it. I had
8 seen his classification of the soils of Bajo 1 as
9 Class 5 and nonhydric. I just wanted to make sure
10 that I was not misunderstanding because I was reading
11 his report in Spanish.

12 And it was clear that I had understood and
13 that we were in general agreement about the
14 characteristics of the soils of Bajo 1. As a courtesy
15 visit, we then talked about pineapple soils and all
16 other sorts of stuff, but that was by the way.

17 Q. Thank you.

18 Now, you'll have in mind that Ms. Paez asked
19 you a series of questions quite correctly around your
20 findings in relation to what you term Bajo 1.
21 Apologies for the double-negative in the question.

22 But could you explain why you did not discount

1 the fill material that the Green Roots Report observed
2 from the surface level down to 105 centimeters?

3 A. There are a number of reasons. One was the
4 nature of the lower parts of the subsoil. As the soil
5 settles, it gradually becomes more compact, and it
6 develops natural structures. However, this takes some
7 time. If you're in a very recent fill, the soil is
8 much looser, it has a much more open friable
9 consistence.

10 And the subsoils that I was observing in Bajo
11 1 had the general feeling of having been in situ for
12 some time.

13 Q. Thank you.

14 And in respect of that answer, did your
15 Observation 14, to which Ms. Paez also referred, have
16 any bearing on, again, this point about how to
17 understand the fill material above the gleyed
18 material?

19 A. What was clear was that the upper parts of the
20 mineral parts of the soils was, basically, red matrix
21 with gray mottles. And that was apparent in
22 the--absolutely clearly understood--not undisturbed

1 soil in Observation 14. Therefore, I would expect and
2 interpreted the natural soil conditions to include
3 some horizons of reddish matrix material. So,
4 therefore, to take the whole of the reddish material
5 as fill is erroneous.

6 Q. Thank you. And final question. Just in
7 general terms, in terms of all of your observations of
8 soils on the site, are you able to tell anything from
9 examining the site in 2016 as to the--the situation in
10 2011 and earlier?

11 A. Sorry. Could you clarify what you mean by
12 that?

13 Q. What can you--okay.

14 Can you observe--make observations now that
15 you can transpose back to 2011 and before in a precise
16 manner?

17 A. Well, apart from Bajo 1, the soils that I saw
18 in 2016 were very similar to as they were in 2011.
19 So, 98 percent of the site is--as I saw it, was
20 probably in similar condition in 2011 except for, of
21 course, there has been some earth moving for roads and
22 terracing. But in terms of drainage and so forth,

1 nothing had changed.

2 Bajo 1 I would expect the soils to have been
3 very similar to what I saw in Observation 14 across
4 the road, but actually slightly better drained because
5 they are further upstream. Observation 14 is on the
6 downstream side of Bajo 1 and would, therefore, expect
7 it to be slightly wetter.

8 MR. BURN: Thank you. I have no further
9 questions.

10 QUESTIONS FROM THE TRIBUNAL

11 ARBITRATOR BAKER: One quick question and then
12 one more open-ended question.

13 As I understand it, hydric is a subset that
14 has come into use in the taxonomy in more recent
15 times; is that correct?

16 THE WITNESS: That is correct.

17 ARBITRATOR BAKER: Okay. So, having reviewed
18 the reports of the various soils engineers and
19 scientists in this case, Dr. Baillie, why is there
20 such a difference of opinion over what seems to be the
21 same areas of land looked at repeatedly by different
22 people?

1 THE WITNESS: I would say that the three
2 specialists who looked at the soils, which would be
3 Dr. Cubero, Green Roots, and myself, we are, actually
4 in more or less agreement about the soils of Bajo 1.

5 We all agree that this is in soil taxonomy
6 terms an endoaquic. We do actually disagree at
7 suborder level, which is the fourth level down in the
8 classification. As to all the other reports, well, I
9 fail to understand how they could make decisions and
10 judgments about wetlands without actual soils data.
11 So, I really can't comment.

12 The one report that is vaguely soil related,
13 the Protti Report, is actually a geo hydrological
14 report and is not concerned with the minutiae of
15 horizons in the upper part of the soil profile, and he
16 just refers to generally wet conditions in one area.

17 So, I think in answer to your question is that
18 the soil specialists are more or less in agreement
19 about the nature of the soils. What we don't agree on
20 is the interpretation and what we're looking at.

21 ARBITRATOR BAKER: So, let me drill down on
22 that--no pun intended--just a little bit about the

1 subsoils.

2 My understanding from you is that it is
3 impossible to come to a reasonable scientific expert
4 conclusion in the absence of soil borings. Is that
5 essentially what you're saying?

6 THE WITNESS: Yes. You can't identify the
7 hydric soil from the surface and therefore, you can't
8 identify a wetland just from surface appearance.

9 ARBITRATOR BAKER: All right. With respect to
10 this fourth level taxonomic dispute between you and
11 the Greenfield people--sorry; thank you--tell me what
12 that means to a non-soils expert.

13 THE WITNESS: Basically, Green Roots agree
14 with Dr. Cubero to some extent that the soil was
15 developed in water-borne alluvium. So,
16 they--Dr. Cubero refers to it as a fluventic, which
17 just means fluve river and recent. So, in a recent
18 river-borne deposit.

19 The Green Roots Report refers to it as
20 fluvaquentic which basically just adds wetness into
21 that. I did not go to that because I wasn't convinced
22 that this was actually a river-borne deposit. I

1 thought it was much more likely to be local soil creep
2 and, therefore, I gave it the name aeric to indicate
3 the mottling.

4 So, this is one of these areas where a precise
5 science becomes slightly subjective because we are
6 actually using--we're making genetic assumptions about
7 formation.

8 ARBITRATOR BAKER: So, does the precautionary
9 principle, in your understanding of it, extend to
10 something that is a fourth-level taxonomic difference?

11 THE WITNESS: I can't see how it applies.

12 ARBITRATOR BAKER: Thank you, Chairman.

13 PRESIDENT SIQUEIROS: If you could go to your
14 report. Let me just make sure that I am understanding
15 the report correctly.

16 On Page 21 of your report, Dr. Baillie, there
17 is a table that makes reference to the different
18 locations. And these locations, as I understand it,
19 we have to read them when we go to page 27 and we look
20 at the map.

21 So, keeping Page 21 still as reference, can we
22 go to Page 27, which is, naturally, just a few pages

1 away. Could you please describe the different
2 locations in this map? I see references to B6, B4,
3 B2, B1 in Figure 5 which is located on page 27 of your
4 report.

5 And when you refer to Bajos 1, Bajos 2, Bajos
6 3, are you referring to this area here in this map in
7 Figure 5?

8 THE WITNESS: A better way of seeing my
9 numbering is if we could look at page 13, my Map
10 number--Figure 3.

11 PRESIDENT SIQUEIROS: Okay.

12 THE WITNESS: And you can see that I've
13 numbered all the Bajos. I didn't number all the Bajos
14 in Figure 5 because not all of them had hydric soils.

15 PRESIDENT SIQUEIROS: Right.

16 THE WITNESS: So, these are just my numbers as
17 I walked up that road and went into the area.

18 PRESIDENT SIQUEIROS: So, let's go to Figure 3
19 on page 13.

20 THE WITNESS: Yes.

21 PRESIDENT SIQUEIROS: There's references in
22 blue color--B1, B2, B3, et cetera, until B6; right?

1 THE WITNESS: Yes.

2 PRESIDENT SIQUEIROS: Those are the
3 areas--those are the Bajos?

4 THE WITNESS: Yes. Right.

5 PRESIDENT SIQUEIROS: Okay. So, when you
6 refer to--and I'm looking at the table on Page 21, the
7 second which reads "imperfectly drained with no gley."
8 That's Bajos 1, 3 and 5.

9 THE WITNESS: Yes.

10 PRESIDENT SIQUEIROS: So, we would go to those
11 1, 3, and 5. But then you go to imperfectly--the
12 following line, Bajo 1.

13 THE WITNESS: Yes.

14 PRESIDENT SIQUEIROS: That reads, "imperfectly
15 drained with gley at depth." And the following line,
16 Bajos 2, "surface gley" and so on.

17 How--just help me out in trying to identify,
18 then with this table where is it that--you know,
19 there's several references to Bajo 1 in the second
20 line and the third line.

21 Where would we find one and where would we
22 find the other? I'm not sure if I made my question

1 understood.

2 THE WITNESS: Yeah, I think I--if we look at
3 Figure 4 on Page 17, this is all Bajo 1.

4 PRESIDENT SIQUEIROS: Yes.

5 THE WITNESS: And there you can see the soils
6 of the different types.

7 So, I've distinguished between the types of
8 observation I made, whether it was an auguring or a
9 mini pit. And then with those that have no blue
10 border to them are those without gleying at depth.
11 So, they are mottled all the way down.

12 Those with the blue border around them are
13 those where I found some gleying at 80 centimeters or
14 below. And that should then tie in with table--the
15 table on page 21.

16 PRESIDENT SIQUEIROS: Am I correct?

17 THE WITNESS: So, those numbers correspond
18 with the corresponding positions in Bajo 1.

19 PRESIDENT SIQUEIROS: Where is the--if I
20 understand correctly, the area which has been
21 refilled, where would that location be? In your Table
22 Number 4, Figure 4 on Page 17?

1 THE WITNESS: On the map, Figure 4, you can't
2 visually tell where there's been fill. There's been
3 no evidence of a great heaping up of soil. But the
4 slope appears to be natural.

5 What have I done?

6 MR. BURN: You're fine. You're fine.

7 THE WITNESS: Oh, okay. Sorry. Me and
8 technology.

9 I could only report that the area that I was
10 told had been--had fill spread on it was roughly from
11 Observation 6 around to about Observation 1. It
12 wasn't clear that there had been any fill to either
13 the south or north of those points.

14 And the fill had stayed on the western side of
15 the natural drainage line which is the line that had
16 then been excavated to form the artificial frame.

17 PRESIDENT SIQUEIROS: Just to make sure that
18 I'm following you, there has been reference and we've
19 seen photographs--we've not done a site visit--to the
20 fact where a road has been constructed. There was
21 road construction, and there was, therefore, filling
22 of what has been alleged that a wetland has been

1 filled. At that road construction where there,
2 presumably was previously a wetland, is it possible to
3 identify that in Figure 4.

4 THE WITNESS: I have identified the easement
5 roads as those gray lines.

6 PRESIDENT SIQUEIROS: Yes.

7 THE WITNESS: And then there is another track
8 that goes into the condominiums area which I've
9 identified as the double dash line.

10 PRESIDENT SIQUEIROS: Right. Was
11 there--because I--was there any observations made in
12 those areas? This is--my question is, if these are
13 areas where there were presumably wetlands, were you
14 advised by the parties that there had been--not the
15 parties--the Claimants who entrusted this report, that
16 there was alleged wetlands in that area and did you
17 make any observations on the soil relating to that
18 area?

19 THE WITNESS: I didn't receive instructions
20 from the Claimants about where I should observe. I
21 was--I was given my general terms of reference to
22 identify wetlands if there were any, indicate their

1 extent and potential disruption by development works.
2 But I was not told where to go.

3 PRESIDENT SIQUEIROS: In your
4 observation--your determination of where to observe
5 would be based on your experience. This is where--or
6 why did you choose the locations that you chose? Was
7 this based on--I'm sure your scientific training and
8 experience. But just give me an indication of why you
9 particularly chose those areas and not others.

10 THE WITNESS: I tried to sample as wide a
11 range of conditions as I could see visually from the
12 surface. And I was particularly looking at areas
13 where there appeared to be wetter vegetation, whether
14 there was taller stands of paspalum and things like
15 that, and also slight declivities in the surface. The
16 surface was fairly smooth. But there were dips and
17 rises. So, I tried to sample the full range.

18 PRESIDENT SIQUEIROS: I don't have any other
19 further questions, Dr. Baillie.

20 MR. BURN: Sorry. Just one question arising
21 out of your questions, sir.

22 PRESIDENT SIQUEIROS: Please.

1 scientist. But I have seen wetlands for 50 years off
2 and on.

3 MS. PAEZ: Thank you.

4 PRESIDENT SIQUEIROS: Thank you very much,
5 Dr. Baillie. We appreciate your report.

6 THE WITNESS: Thank you.

7 PRESIDENT SIQUEIROS: In the meantime, I would
8 just--point of a housekeeping. We have been advised
9 that the United States of America has requested that
10 they are provided with the live transcripts as they
11 are being delivered. And although these do become a
12 matter of public record in their final form, the
13 United States has requested perhaps in their
14 preparation between now and the next few days where
15 they wish to make any comment for them to be delivered
16 today in their rough draft form.

17 Would the parties have any objection to making
18 that delivery?

19 MR. BURN: Absolutely none as long as they get
20 a complete transcript of all days of the hearing in
21 order that they can--

22 PRESIDENT SIQUEIROS: Indeed.

1 MR. BURN: But absolutely no objection.

2 PRESIDENT SIQUEIROS: That would be the case.

3 MR. LEATHLEY: I don't believe we have any
4 objection either, sir.

5 PRESIDENT SIQUEIROS: Okay. Thank you very
6 much. How would the parties wish to proceed?

7 MR. BURN: Could we have a five-minute break.

8 MR. LEATHLEY: Yes. If we could have a
9 comfort break, as they say, sir. Five minutes.

10 MR. BURN: Euphemistically.

11 PRESIDENT SIQUEIROS: Okay. Certainly. Thank
12 you.

13 (Brief recess.)

14 PRESIDENT SIQUEIROS: If the Court Reporters
15 are ready to proceed, we can do so.

16 And it is now the turn of Drs. Langstroff and
17 Calvo.

18 (Pause.)

19 PRESIDENT SIQUEIROS: You will both be
20 testifying in English; correct?

21 THE WITNESS: (Dr. Calvo) Yes.

22 THE WITNESS: (Dr. Langstroff) That's correct.

1 PRESIDENT SIQUEIROS: Okay. As expert
2 witnesses, you will--after the initial questions from
3 counsel to Claimants, you will be enabled to make a
4 presentation, to be followed, as you have identified,
5 by a cross-examination on the part of counsel to the
6 Republic of Costa Rica, and thereafter by--some
7 questions, if they feel the need to do so, by counsel
8 to Claimants.

9 As you are aware, the Tribunal may ask
10 questions in between if it deems advisable to do so.

11 Although this is a joint report that you have
12 prepared and we have gone through the exercise of who
13 would be responding, my understanding--and I would ask
14 you to confirm that questions can be presented to
15 either one of you, and I would like us to establish
16 how the rules will be followed as to if a question is
17 presented, for example, to Dr. Langstroff, if he needs
18 to respond or Dr. Calvo will be enable to do so.

19 So, before we proceed with the examination, I
20 think that those rules should be clear. But once we
21 identify this, the process is as you are aware; the
22 answers shall need to be made. Clarifying questions

1 may be made afterwards.

2 And if you are unaware or do not understand
3 well a certain question, please feel free to request
4 any clarification.

5 And finally, there's a statement that I would
6 ask both of you to read to your participation as
7 experts.

8 THE WITNESS: (Dr. Calvo) I solemnly declare,
9 upon my honor and conscience, that my statement will
10 be in accordance with my sincere belief.

11 THE WITNESS: (Dr. Langstroff) I solemnly
12 declare, upon my honor and conscience, that my
13 statement will be in accordance with my sincere
14 belief.

15 PRESIDENT SIQUEIROS: Okay. Thank you.

16 Mr. Burn?

17 MR. BURN: Thank you.

18 DIRECT EXAMINATION

19 BY MR. BURN:

20 Q. Just for formality's sake, Drs. Calvo and
21 Langstroff, there ought to be, at the top of that
22 file, a copy of your Report. I'd be grateful if you

1 could just quickly inspect the Reports and confirm
2 whether or not that is your Report.

3 A. (Dr. Calvo) Yes, it is.

4 Q. Are there any revisions or amendments you need
5 to make?

6 A. (Dr. Calvo) None.

7 Q. Actually, I don't think there's a signature on
8 this, but you would confirm, in any event, that even
9 in the absence of a signature, that is your joint
10 Report?

11 A. (Dr. Calvo) This is our Report.

12 MR. BURN: Thank you very much. No further
13 questions.

14 MR. LEATHLEY: May I make just a short
15 suggestion on the protocol perhaps we adopt. I will
16 have questions for specifically Drs. Calvo and Dr.
17 Langstroff respectively during the course of my
18 cross-examination. If there's a general question, I
19 should--it should be incumbent upon me to direct it.
20 If I don't, may I make a suggestion that the first
21 person or the person that the gentlemen believe should
22 be best placed to respond answer, but that they answer

1 then subsequent questions until there's a break in the
2 theme; or, you know, unless--if I were to pose the
3 same question or a modification of it to the other
4 doctor for a specific reason.

5 PRESIDENT SIQUEIROS: So, what you are
6 referring to is if there's a question and there's
7 follow-up questions on the answers, that it be the
8 same person who started addressing the answer who
9 should proceed with that line of questioning.

10 MR. LEATHLEY: I would suggest that as a
11 starting point, sir. I'm highly appreciative the
12 Tribunal want to understand this, and so, it's in your
13 interest that you have an answer and that there be no
14 games-playing in that regard.

15 So--just to express that good will on our part
16 as well, sir.

17 MR. BURN: Sorry. Can I just intervene on
18 that?

19 I don't fundamentally disagree with Mr.
20 Leathley's observations except to say that all experts
21 owe a duty to the Tribunal and to the process, and it
22 is therefore possible--I put it no higher than

1 that--that one or other may have a slightly different
2 view in relation to a particular question.

3 So, they must always be afforded an
4 opportunity for intervention if Dr. Langstroff takes a
5 different view to Dr. Calvo on a particular point.
6 Not that I think there are any differences, but just
7 to say that that must be afforded to any expert in
8 order that they can discharge their duties to you.

9 PRESIDENT SIQUEIROS: Indeed, but that should
10 be after that line of questioning has been handed out;
11 otherwise, it would simply make the question/answer
12 very difficult to follow, both for the cross-examiner
13 as well as for the Tribunal.

14 MR. BURN: Agreed.

15 PRESIDENT SIQUEIROS: Okay.

16 MR. LEATHLEY: Thank you, sir. Just one other
17 observation, because I understand that the doctors are
18 going to be presenting a presentation; is that right?

19 I do note that they have notes on their desk.
20 We have no objection, of course, to them using notes
21 during the presentation, but we would just ask that
22 they not be consulted during any cross-examination.

1 PRESIDENT SIQUEIROS: Absolutely.

2 THE WITNESS: (Dr. Calvo) No problem.

3 MR. LEATHLEY: Thank you, sir.

4 MR. BURN: So, just hand it over to you, Drs.
5 Calvo and Langstroff, and if you could deliver your
6 presentation.

7 DIRECT PRESENTATION

8 THE WITNESS: (Dr. Calvo) Thank you. I will
9 begin. We have, we understand, about five minutes,
10 so, we will go down to the main points.

11 There are three elements of context to then
12 work up our conclusion.

13 One is that the Las Olas site is a wet site.
14 It rains about 3,000 millimeters a year. That is
15 almost double of the rainfall--the annual rainfall in
16 Florida. It rains a lot. So, there is a lot of
17 water.

18 Second, the site has a very particular
19 topography. Imagine a sheet, a bedsheet, that you'd
20 drop down, and it has wrinkles, and there are furls,
21 and there's some flatter areas. The site kind of
22 looks like that.

1 That creates, for the purposes of our
2 conversation regarding potential wetlands on site,
3 three types of areas: There are areas where there is
4 a gentle sloping area with a bottom area, the water
5 can kind of sit there when it rains; there are some
6 other areas, especially to the east of the site, where
7 the wrinkles in the relief are sharper, and the water
8 would tend to just flow quickly through there, towards
9 the Aserradero system; and then the southwest corner
10 of the site is more of a gently sloping area towards
11 that corner and out of the site.

12 Those general areas are the areas in question
13 regarding whether there are wetlands or not.

14 And third, the third context element, is that,
15 as we have heard this morning, there isn't a given
16 methodology in Costa Rica, an operational way of going
17 out to the site and determining if there is a wetland.
18 Much of the way we will have to do it would rely on
19 professional expertise.

20 So, with those three things as a context, I
21 went to the site, and I saw an area distinctly called
22 Wetland 2 by Kevin Erwin, Depression 1 by Dr. Baillie.

1 We call it D1, I believe.

2 That is an example of a gently sloping area
3 that forms a shallow bowl. When I was there in March,
4 there was about 20 centimeters of water. The
5 vegetation inside a flooded area was herbaceous
6 grasses. And then there was a sharp edge. The slope
7 goes up. And then there were shrubs and palms and a
8 few trees.

9 So, that looks like a wetland. There's water,
10 there's some plants that look typical. So, what would
11 we do to determine if there's a wetland?

12 To use a systematic approach, we would have to
13 go to, say, to the center of the site which is full of
14 water and do a hopefully quantitative analysis and
15 determine if there is a preponderance of wetland
16 plants, the hydrology, and then whether the soils are
17 hydric or not.

18 You do that in the center, and you start
19 moving outwards until at some point, you get to a
20 point where you don't find those three
21 characteristics; and somewhere in there, you say, this
22 is the boundary, the upland wetland boundary.

1 There should be a systematic approach in doing
2 so.

3 So, I'm focusing more on the Second Report by
4 Mr. Erwin and his team, and I read the methodology.
5 And my conclusion is that a poor methodology results
6 in unreliable results. You read the methodology, and
7 all I find is, "We walked the perimeter of the target
8 wetland. We took GPS points. We made a list of
9 species, plant species. And we visually estimated the
10 percent cover of each of the 108 species that they
11 found."

12 So, imagine that--imagine that I'm trying to
13 do that on a potential wetland that is the size of a
14 football field. How do I do that without a systematic
15 approach? Walk around, I already--it sounds like I
16 already determined what the boundary is, so, I walk
17 it, I take GPS points, take a list, and I go, oh, the
18 one species--1 percent. Another species, 3 percent.
19 I--in the text, there's nothing that tells me exactly
20 how that was done.

21 And yet, they have results that go very much
22 into saying there are wetlands and there are these

1 species, and they classify the species into wetland
2 and wetland upland species and upland--the results do
3 not follow the methods.

4 And Dr. Langstroff now will talk especially
5 about the--the species, the list, and the
6 classification, and some of the observations we have
7 about the species list.

8 Robert?

9 DIRECT PRESENTATION

10 THE WITNESS: (Dr. Langstroff) Good afternoon,
11 or late morning. My discussion here is going to focus
12 again on the findings of the Botanical Study, which is
13 Appendix A of the-second KECE Report. The study, I
14 believe, was prepared by botanists from Siel Siel.

15 It is common practice, as--as we know, to
16 utilize indicator species or utilize a classification
17 of plant species based on their ecological tolerances
18 to help establish criteria for delimiting wetlands.

19 In the United States, there is an extensive
20 database of plant occurrences, and there are
21 statistical and probabilistic values attached to these
22 categorizations.

1 And the case of Costa Rica, as we know, there
2 is no accepted national classification or
3 categorization of wetland species. There are lists
4 that have been published of plants that have been
5 known to occur in wetlands, but there's no real
6 equivalent classification system, which--which is
7 fine; we shouldn't expect there to be, necessarily.

8 And I think, you know, not incorrectly, the
9 Costa Rica's wetland specialist that was consulted
10 applied this methodology to the best that you can
11 under the conditions.

12 And so, when we analyze the findings of the
13 Siel Siel Botanical Report that was prepared from the
14 second surveys from August and September of this year,
15 we find a total of 108 species present within the
16 areas delimited as wetlands. Again, in three days,
17 total of 28 hours in the field in August and September
18 of this year.

19 Out of those 108 species, we find that 38 are
20 classified as upland species. And again, species that
21 are associated with nonwetland habitats,
22 species--especially long-lived plants, such as trees,

1 as you're familiar with, these can't persist in an
2 area that is a wetland if they're an upland tree.

3 You might find a seedling, you might find a
4 sapling that might be there in a few dry seasons, but
5 you're not going to find a mature canopy tree that
6 belongs to an upland habitat in a wetland. It makes
7 sense.

8 Then there are 14 species that were identified
9 as being strict wetland species, i.e., species that
10 occur only in wetlands, and which we consider to be
11 indicators of hydrophilic vegetation in accordance
12 with the Costa Rican definition.

13 Now, there are a larger number of species
14 which couldn't be classified as either upland or
15 wetland; so, 56 out of the 108 species identified are
16 species that could grow either in a wetland or in a
17 nonwetland. Could grow in a swamp or it can grow on a
18 dry ridgetop.

19 And, you know, in the United States, when we
20 utilize the USDA classification system, we have really
21 five categories. And here, we have three. And so,
22 we're--we're forced to kind of lump the species that

1 in the United States would be a little bit more finely
2 differentiated into obligate wetland species,
3 facultative wetland species, facultative upland and
4 upland species. We don't know exactly where they fall
5 within this third category of wetland upland. Okay.

6 And for purposes of this Arbitration, this is
7 very important, because we're trying to make a
8 decision about the presence or absence of a wetland.
9 And again, based on the Costa Rican law--the Costa
10 Rican legislation, we need to, again, have three
11 conditions present: We need to have hydrophylic
12 vegetation, we need to have hydric soils, and hydric
13 condition.

14 And so, I'm focusing again simply on evidence
15 to indicate a prevalence of hydrophylic vegetation.

16 Next slide.

17 And this is a summary of the findings of the
18 various tables presented in the Appendix A of the
19 Second KECE Report. You won't find these numbers in
20 their Report because they weren't analyzed in this
21 way.

22 So, what we have here, we have each of the

1 areas that were delimited, which I am calling "P" for
2 polygon--simply an area defined by a bunch of points
3 connected by a line.

4 So, we have these eight polygons, and within
5 these eight polygons, we have data that indicate
6 percent cover by plant species, by their ecological
7 classification. And we have canopy, subcanopy, and
8 groundcover.

9 The canopy here are trees. Subcanopy are
10 small trees or shrubs. And the groundcover are
11 herbaceous plants, grasses, and sedges and other small
12 things. Okay?

13 And so, when we look at these data, the first
14 thing that's apparent is we don't have a single
15 wetland tree present on the site, which is
16 interesting. Okay.

17 So, canopy cover for W species is zero across
18 the board.

19 Subcanopy, we have varying levels of cover by
20 what's indicated in their classification as a wetland
21 species. It's a single species known as mimosa pigra,
22 which is a highly invasive leguminous shrub, a very

1 prickly plant that grows in a wide range of habitats,
2 indeed does very well in wetland habitats, absolutely;
3 but it's also found in--as a weed in rangelands that
4 are not wetlands, in palm plantations, and various
5 sorts of agricultural situations.

6 It really shouldn't be considered a strict
7 wetland species, based on my experience working in
8 Latin America for more than 30 years and numerous
9 tropical countries. I know this plant very well.

10 But even if we take it at face value, as
11 presented here, we find relatively small degrees of
12 cover, ranging from zero in a few cases--in one case,
13 we have up to 30 percent covered by this plant.

14 In terms of the groundcover, we see relatively
15 small numbers again, in terms of groundcover, percent
16 covered by strict wetland species ranging from
17 zero--in two of the areas purported to be wetlands, we
18 actually have no cover by a strict wetland herbaceous
19 species.

20 And in one case, we have--you see a big number
21 there. We see 60, 60 percent cover by a wetland
22 species. This is the case of a small floating aquatic

1 plant of the genus Lemna commonly known as duckweed.
2 And duckweed is an aquatic plant, and in this
3 particular situation, this 60 percent cover
4 corresponds to a ponded area along the highway to the
5 north of the site where drainage has been impeded by
6 construction of this road years ago, and it fills up
7 with water. But beyond the duckweed, there aren't any
8 other strict wetland species in that site.

9 So, overall, we're ranging from zero to 14
10 percent coverage in strict wetland species in all the
11 remaining delineated areas; and again, you know, the
12 percent cover by upland species is often higher than
13 the cover of wetland species in these areas. So, it's
14 really not very conclusive evidence. We certainly
15 don't see any sort of a preponderance or dominance or
16 prevalence of documented, well-known obligate wetland
17 species.

18 And as I will point out further, the W/U
19 wetland or upland plant classification as used here
20 really can't be considered conclusive evidence for a
21 wetland.

22 Next slide.

1 And so, just some examples of species that we
2 have picked out in part, on our own--from our own
3 background, in a part due to critiques of our First
4 Report, and we'll go through these quickly.

5 What we did was, where possible, we
6 fact-checked the references that were used by the Siel
7 Siel team in order to develop these classifications.
8 And we acknowledged that utilizing published floras,
9 published lists of species, plant manuals, et cetera,
10 is established practice.

11 And so, here, we are citing the flora
12 Costaricensis which is an established authority or
13 source by the Field Museum of Natural History, and it
14 says this species here is a tree of deciduous,
15 partially deciduous, and lowland evergreen rainforest
16 formations. Again, no mention of wetlands here.

17 Next.

18 One other species that's been indicated as a
19 "W/U" species is, in fact, the national tree of Costa
20 Rica and sort of the prototypical dry forest species
21 of Central America, the guanacaste tree, also not a
22 species that anybody would think of as an indicator of

1 a wetland.

2 Next.

3 A plant that's been discussed in various
4 documents in a weedy grass of the tropics native to
5 the neotropics but expanded around the world, again,
6 something you'll find in many, many situations, can be
7 common in wetlands but can be very common in
8 nonwetlands.

9 Next.

10 Now, there was some discussion of--in our
11 previous Report about three genera of plants:
12 Costus--let me just go through these to save
13 time--Calathea and Heliconia.

14 Next one.

15 And I was criticized by considering these not
16 to be wetland plants in the sense of being strict
17 indicators of wetlands.

18 These are plants both in species and on a
19 general level that occur in a wide range of habitats.
20 Wherever there is sufficient moisture, you can find
21 these plants in wetlands, but you can find them just
22 as well in a shady spot under a forest canopy where

1 there's humidity; or, as in the case of this
2 particular species, which was one documented from the
3 wetland, this is actually a species that is well-known
4 to occur in areas that are secondary open sites
5 because of its ability to tolerate drought. And this
6 is--pardon the German here, but that was a good
7 source.

8 And so, based on this quick review, again, in
9 the essence of time, we find that the--basing a
10 conclusion of wetlands on these "W/U" species is a
11 perilous enterprise, which--and so, also, furthermore,
12 I simply want to point out that in the text of the
13 KECE Report, in Paragraphs 18 through 25, there's a
14 bit of confusion on the use of these classifications.
15 We find the KECE Report itself grouping together the
16 wetland species plus the wetland upland species and
17 stating these to all be wetland plants, which we
18 disagree with strongly.

19 And, again, in conclusion, the data provided
20 by the Report does not permit us to make a decision
21 that we have a dominance or a prevalence of any sort
22 of hydrophylic vegetation in the areas delimited as

1 wetlands.

2 Thank you.

3 MR. BURN: Thank you. No questions.

4 PRESIDENT SIQUEIROS: Thank you.

5 Mr. Leathley?

6 MR. LEATHLEY: Thank you, sir.

7 And just one observation, if I may. We have a
8 copy, a hard copy of the presentation, but we seem to
9 be missing some of the slides from that presentation.
10 So, if I could request at some point getting a
11 complete copy, that would be helpful.

12 PRESIDENT SIQUEIROS: Especially the last
13 slide identifying back.

14 MR. LEATHLEY: Thank you.

15 CROSS-EXAMINATION

16 BY MR. LEATHLEY:

17 Q. Good afternoon, gentlemen.

18 A. (Dr. Calvo) Good afternoon.

19 Q. Drs. Calvo and Langstroff, you've prepared a
20 single Report for this Arbitration, finalized on the
21 28th of July, 2016; is that right?

22 A. (Dr. Calvo) That is correct.

1 Q. And you both work for ERM, although your
2 Report doesn't bear any ERM logo; is that right?

3 A. (Dr. Calvo) That's correct.

4 Q. Is ERM aware that you produced this Report?

5 A. (Dr. Calvo) Yes, they are.

6 Q. Is there any reason why it doesn't bear the
7 ERM logo?

8 A. (Dr. Calvo) Not in particular. I'm a partner
9 at the company and I produced the report. Robert
10 helped review it. I'm--we just are acting as experts
11 in this Arbitration. It just so happens that we work
12 for ERM.

13 Q. It just so happens you work for ERM, but is
14 this an ERM report?

15 A. (Dr. Calvo) You could say it is, yes.

16 Q. Why would you qualify, "You could say it is"?

17 A. (Dr. Calvo) Because we have been working, the
18 two of us, on this Arbitration without help from other
19 partners, for example, and--but the agreement, the
20 commercial agreement to do this work, was through ERM.

21 Q. Okay. Thank you.

22 And Dr. Calvo, you visited the property on the

1 6th and the 7th of July; is that right?

2 A. (Dr. Calvo) That's correct.

3 Q. And, Dr. Langstroff, what has been your
4 contribution to the Report?

5 A. (Dr. Langstroff) My contribution has been the
6 review of selected documents, documents that provide
7 information on the--the plant species present or
8 identified as being present at the site.

9 Q. Thank you.

10 And in your Report, you testify that you
11 conducted an assessment of the environmental
12 conditions in the Las Olas project; is that right?

13 A. (Dr. Calvo) That's correct.

14 Q. And you state in your Report that the scope of
15 your Report was to determine whether there were or has
16 ever been wetlands in the project site; is that right?

17 A. (Dr. Calvo) That's correct. And I did two
18 days on the site and I did a reconnaissance of the
19 site conditions.

20 Q. And you also say that you attempted to
21 determine whether there were or has ever been a forest
22 or trees protected by Costa Rican law in the project

1 site; right?

2 A. (Dr. Calvo) That's correct.

3 Q. And you say that for the purpose of your
4 Report was to determine whether the Claimants caused
5 any harm to those protected trees and forests; is that
6 right?

7 A. (Dr. Calvo) Would you show me where I say
8 that?

9 Q. Yes. It's Paragraph 1 of your Report.
10 Paragraph 1d.

11 A. (Dr. Calvo) Yes. That was part of the
12 original language of the agreement, the expert witness
13 agreement. As you can see, I believe through the rest
14 of the Report, we really don't go there in our--

15 Q. Yes. No. I noticed that, sir.

16 A. (Dr. Calvo) Yeah.

17 Q. So, your Report actually doesn't take any
18 position on whether or not harm was caused by the
19 developers.

20 A. (Dr. Calvo) That is correct.

21 Q. Uh-huh. Okay. And you're aware that the
22 Claimants have owned the land since 2002?

1 A. (Dr. Calvo) That's correct.

2 Q. Which means your Report, if I understand it
3 correctly, is summarizing the behavioral patterns for
4 38 hectares over a period of 14 years; is that right?

5 A. (Dr. Calvo) Our Report is based on two main
6 things in terms of this question.

7 Q. Yes.

8 A. (Dr. Calvo) One is the observations on the
9 visit that I make, the review of Kevin Erwin's
10 Reports, and the review of the aerial photography.

11 Q. Understood, sir, but just going back to
12 Paragraph 1 and looking at the scope of your Report,
13 you're talking about whether the site has--contains or
14 ever has contained wetlands.

15 A. (Dr. Calvo) Correct.

16 Q. That's the scope of your Report; is that
17 right?

18 A. (Dr. Calvo) Yes.

19 Q. And you do that in 13 pages?

20 A. (Dr. Calvo) Yes, the entire Report.

21 Q. For 14 years.

22 A. (Dr. Calvo) Yes.

1 Q. Okay. Thank you.

2 With two photographs?

3 A. (Dr. Calvo) Yes.

4 Q. And five Google Maps covering 2002, 2012, and
5 2016 [sic]?

6 A. (Dr. Calvo) That's what the Report contains.

7 Q. Just three years; is that right, sir?

8 A. (Dr. Calvo) Yes.

9 Q. For a period of 14 years.

10 A. (Dr. Calvo) That's correct.

11 Q. Okay. And based on one conversation with a
12 neighbor, as I understand; is that right?

13 A. (Dr. Calvo) The conversation with the neighbor
14 was part of the visit, and we had several
15 conversations; and in that particular case, that
16 conversation was regarding some past condition of the
17 site.

18 Q. Uh-huh. And this is a neighbor who the
19 Claimants introduced you to; is that right?

20 A. (Dr. Calvo) Yes.

21 Q. Right.

22 And you didn't conduct a soils survey, did

1 you? You say that openly in your Report.

2 A. (Dr. Calvo) I did not.

3 Q. So, whatever you found in absence of a soil
4 survey, you are never going to be able to say there is
5 definitive evidence to find a wetland, were you?

6 A. (Dr. Calvo) We say in the Report that we found
7 evidence of some potential characteristics of
8 wetlands, but we did not complete a soil survey; and
9 therefore, we cannot conclude definitively.

10 Q. Right. So, do you consider that a fair or
11 reasonable approach to define the parameters of your
12 investigation such that you could never conclude that
13 there was a wetland?

14 A. (Dr. Calvo) Could you repeat that question?

15 Q. Yes, sir.

16 Do you consider it fair or reasonable for you
17 to define the parameters of your investigation such
18 that you could never conclude that there is a wetland?

19 A. (Dr. Calvo) We were not trying to determine if
20 there were wetlands under--

21 Q. That's not what you say in your Report, sir.

22 A. (Dr. Calvo) --the three parameters. We had

1 one visit for two days, and we completed observations
2 regarding vegetation and some of the hydric
3 conditions, but we did not complete the soil analysis.

4 Q. Right. So, let's go back to the scope of your
5 survey. Your scope says, "whether the Las Olas site
6 contains or has ever contained wetlands."

7 And to do that, you needed to have a soil
8 survey, which you did not do.

9 A. (Dr. Calvo) Which we did not do.

10 Q. So, you could never, in any version of your
11 Report, have concluded that there are wetlands; you
12 were tying your own hands on that conclusion.

13 A. (Dr. Calvo) In reaching that conclusion, you
14 can say that.

15 Q. Right.

16 Now, the only tool--actually, sorry, sir.

17 Excuse me one moment.

18 (Pause.)

19 BY MR. LEATHLEY:

20 Q. Could you please--and I leave it open to who
21 answers this question. Could you please explain to
22 the Tribunal why wetlands are so heavily protected,

1 both in Costa Rica and worldwide?

2 A. (Dr. Calvo) I can begin an answer and let
3 Robert continue it?

4 Q. And apologies. I will interrupt you at some
5 point. So, I'll give you advance notice; I will
6 interrupt you. But it would be interesting to hear--I
7 will interrupt you.

8 A. (Dr. Calvo) Fair warning.

9 Q. Thank you.

10 A. (Dr. Calvo) In general, wetlands are
11 recognized as having important ecological functions,
12 including attenuation of floods. Repository of
13 biodiversity that have been recognized in both
14 individual countries around the world and the
15 international community have both found and created
16 legislation and rules and agreement to protect
17 wetlands.

18 Robert? You want to add?

19 A. (Dr. Langstroff) Right. And, of course, we're
20 all familiar with the Ramsar Convention, which is, in
21 part, the origin of some of the language in some of
22 the Costa Rican legislation.

1 The Ramsar Convention was something signed in
2 a town called Ramsar in Iran back in 1971, and its
3 intent was to urge the countries of the world to
4 identify wetlands of international significance and to
5 contribute wetlands from their countries to a list of
6 wetlands of international significance, which we talk
7 about as the Ramsar list. We talk about Ramsar sites.

8 Q. And it was more about the ecological
9 significance, so, why are they so heavily protected--I
10 understand the Ramsar Convention and we may come to
11 that, but more in terms of the ecological, as Dr.
12 Calvo was beginning to explain, would you agree that
13 it helps with the generation and the preservation of
14 soils with the pollination of crops--you were talking
15 about the biodiversity, that it maintains
16 biodiversity? Would these be your--

17 A. (Dr. Calvo) In general, wetlands have
18 functions, some more than others. Some wetlands
19 under--thinking about Ramsar, are very important
20 because of their extension, their biodiversity value.
21 Other wet areas, or even wetlands, may have the three
22 parameters, but they may not be that important or

1 sensible--or sensitive in terms of their ecological
2 value.

3 Q. Understood. Thank you.

4 And so, would you agree with Mr. Erwin when he
5 describes in his report the environmental significance
6 of a wetland?

7 A. (Dr. Calvo) I agree--I think we both agree
8 with the conceptual description of the general value
9 of wetlands.

10 Q. Thank you.

11 And would you agree with the assessment that
12 once you destroy, you could cause irreparable harm to
13 a wetland?

14 A. (Dr. Calvo) At face value, yes.

15 Q. And therefore, would you agree with a
16 gentleman who's appeared during the course of this
17 week, Mr. Mussio, who is the architect, who testified
18 that you cannot leave things to chance when
19 identifying a wetland?

20 A. (Dr. Calvo) I agree that if you are to
21 identify a wetland, you should follow a methodology
22 that is well put together.

1 Q. And I presume there's a need to be
2 particularly sensitive to these ecosystems because of
3 their inherent sensitivity; is that right?

4 A. (Dr. Calvo) Again, some wetlands are very
5 sensitive; other wetlands are little more than weedy,
6 wet areas.

7 Q. Right.

8 A. (Dr. Calvo) So, it's relative. Not all
9 wetlands are created equal.

10 Q. Understood, sir.

11 A. (Dr. Calvo) Yeah.

12 Q. And so, we're obviously in the world of
13 palustrine wetlands. Would--based on sort of the
14 ideas of protection, would you agree that if there is
15 evidence of a potential wetland that it should be
16 taken seriously?

17 A. (Dr. Langstroff) We'd agree, if there are
18 evidence of a potential wetlands, it should be taken
19 seriously. We certainly agree with the importance of
20 Costa Rica's right and obligation to protect wetlands
21 of high biodiversity value.

22 And, again, as you know--wetlands vary, as

1 pointed out by Dr. Calvo; and so, when there is a
2 potential for the identification of a wetland, it is
3 certainly very important that that wetland be
4 thoroughly examined and that its boundaries be
5 thoroughly delimited based on the criteria applied in
6 the particular legal situation, in this case, Costa
7 Rica, in this case, the MINAE Decree that establishes,
8 again, three essential criteria that all three must be
9 present in the place: The presence of the soil--

10 Q. I'm sorry to interrupt you.

11 A. (Dr. Langstroff) Very good.

12 Q. We'll come on to that. The question was
13 slightly different.

14 A. (Dr. Langstroff) Yep.

15 Q. Just returning to you, Dr. Calvo, the Ramsar
16 Convention nor Costa Rican law makes any difference
17 between what is seen as a valuable wetland or not;
18 right? They just protect wetlands?

19 A. (Dr. Calvo) As I understand it.

20 Q. Right. Thank you.

21 Dr. Langstroff, you say in your Report that
22 you reviewed the areas identified in the KECE Report

1 that KECE identifies as wetlands; is that right?

2 A. (Dr. Langstroff) That's correct.

3 Q. And, Dr. Calvo, you took a couple of pictures
4 of the areas that you walked; is that right?

5 A. (Dr. Calvo) That's correct.

6 Q. And it was just two pictures?

7 A. (Dr. Calvo) I took a few more.

8 Q. Now, those aren't in your Report, are they?

9 A. (Dr. Calvo) They are not in the report.

10 Q. Were they shown to Dr. Langstroff?

11 A. (Dr. Calvo) Yes.

12 Q. And he reached a conclusion based on those
13 photographs?

14 A. (Dr. Calvo) A conclusion regarding--

15 Q. I'm sorry. Dr. Langstroff, you reached a
16 conclusion based on those photographs?

17 A. (Dr. Langstroff) I reached a conclusion based
18 on the--well, in our First Report, obviously, I based
19 the conclusion based on all of the available
20 information, which was not simply Dr. Calvo's Report
21 or photographs. As you well know, there are hundreds
22 of documents entered into this case, including reports

1 going back to 2008, 2010. There's a lot of
2 information that--

3 Q. Understood, sir.

4 A. (Dr. Langstroff) --that we reviewed, so--

5 Q. And I'm just interested in what's in your
6 report. So, in your Report for this Tribunal, you
7 include two photographs, but you don't include the
8 other data that you--

9 A. (Dr. Calvo) That's correct. And let me
10 clarify the preparation of the Report. I was the main
11 author of the report. Robert reviewed it for me, and
12 we talked about it, but I wrote the Report.

13 Q. Now, you haven't included any other records of
14 the areas that you visited in the property; for
15 example, we understand from Claimants' counsel that
16 you did not use or create any KMZ files; is that
17 correct?

18 A. (Dr. Calvo) I did not.

19 Q. Would you mind explaining, for the benefit of
20 the Tribunal, what is a .KMZ file?

21 A. (Dr. Calvo) In layman's term?

22 Q. Ideally, sir, for me as well. That would be

1 helpful.

2 A. (Dr. Calvo) Basically, those are files that
3 have georeference points that can be placed on top of
4 typically, and more and more used lately, Google Earth
5 map, for example.

6 Q. Thank you.

7 And so, Dr. Calvo, you were walking around the
8 site with no means of accurately verifying where you
9 were when you were making your observations.

10 A. (Dr. Calvo) Not on a georeferential fashion,
11 correct.

12 Q. And you expected Dr. Langstroff to verify your
13 findings without such data; is that right?

14 A. (Dr. Calvo) Let's describe what the findings
15 are and--as we were doing there.

16 Q. We'll come to that in a moment. I'm
17 interested in your methodology that you said was very
18 important.

19 Your methodology was you didn't take any
20 geosatellite data-plotting and therefore, Dr.
21 Langstroff would have been unable to identify where
22 you were when you were making various observations; is

1 that right?

2 A. (Dr. Calvo) Dr. Langstroff was not commenting
3 on whether there were wetlands or the extent of the
4 wetlands. He was concentrating his research and his
5 review on literature review of some of the species
6 that were listed, like Kevin Erwin's report, and we
7 talked much about the meaning of the species and that
8 species, but he was not in the field, and he did not
9 intend--did not intend or pretend to verify the extent
10 of wetlands.

11 Q. Understood.

12 Then Dr. Langstroff, your contribution, as you
13 said before, was about some of the vegetation. And
14 so, you were not given any GPS or any data to confirm
15 the observations that were made by Dr. Calvo as to
16 where they were made; is that correct?

17 A. (Dr. Langstroff) My role--

18 Q. I'm sorry, sir, it's a simple question,
19 whether you were given data.

20 A. (Dr. Langstroff) I was given data, yes.

21 Q. So, you had KMZ files.

22 A. (Dr. Langstroff) I had--again, my role was not

1 to evaluate Dr. Calvo's data. My role was to evaluate
2 data presented by Costa Rica to identify wetlands. I
3 don't--ERM was not hired to do a wetland delineation;
4 it was hired to examine evidence which is--including
5 photographs taken by various individuals, again,
6 examining satellite imagery, aerial photos, species
7 lists. There was lots of evidence that can be taken
8 into consideration, not simply what was collected by
9 Dr. Calvo.

10 Q. Understood--sorry, sir. I want to ask Dr.
11 Langstroff another question on this.

12 You have testified to this Tribunal regarding
13 an array of vegetation which you do not have firsthand
14 knowledge of because you didn't visit the site; is
15 that correct?

16 A. (Dr. Langstroff) I have firsthand knowledge of
17 many of the species that--

18 Q. No, sir. I'm talking about the site, sir.

19 A. (Dr. Langstroff) I have no firsthand knowledge
20 of this particular site, that's correct.

21 Q. So, the data set that you were being provided
22 to analyze the vegetation was not something that you

1 could have oriented to somewhere specifically on the
2 land; is that right, because you did not have the
3 plotting location?

4 A. (Dr. Langstroff) I'm not sure which data set,
5 again, you're referring to.

6 Q. Okay. Let me make it a little simpler, sir.
7 If I asked you now to walk to the site and tell me
8 where a certain vegetation is growing which you have
9 identified in your report, you would not be able to
10 take me to that specific location, would you, sir?

11 A. (Dr. Langstroff) I disagree, sir. I'd be
12 happy to do so.

13 Q. How would you accumulate that data?

14 A. (Dr. Langstroff) Because I have all the KMZ
15 files that were presented by the KECE team, and that
16 is the basis upon which the determination of wetlands
17 on the site is to be made.

18 Q. But you don't know, because Dr. Calvo didn't
19 plot it, when Dr. Calvo made an observation, what he's
20 referring to. There's no way Dr. Calvo could have
21 identified a specific KMZ location because he didn't
22 have that equipment.

1 A. (Dr. Langstroff) That is correct. However, it
2 does not bear upon any of my conclusions.

3 A. (Dr. Calvo) Can I clarify on what we did,
4 which is relevant to the question?

5 Q. Yes, please. Go ahead.

6 A. (Dr. Calvo) I did not even create a wetland
7 list when I was there. I walked around, I saw, I
8 gathered in a reconnaissance-type evaluation. I
9 gather a general impression of the site. I recognized
10 many of the species. And if you look at our Report,
11 we indicate that KECE, both in the First Report and
12 now that we know the Second Report, they did develop a
13 list of species, and we did not dispute the list of
14 species.

15 So, we accept that 97 species in the First
16 Report and the second list was 108 species. We accept
17 that those species are on site.

18 So, there was no information on the location
19 of specific trees or shrubs or herbaceous plants that
20 I created that then Robert would have to either accept
21 or not. So, I did not do that.

22 Q. Now, Dr. Baillie conducted a soils study, and

1 you were aware of that, is that right, before you
2 prepared your Report?

3 A. (Dr. Calvo) I knew that Dr. Baillie was doing
4 that, yes.

5 Q. And Dr. Baillie's Report is dated the 31st of
6 July, and your Report is dated the 28th of July; is
7 that right?

8 A. (Dr. Calvo) I don't know what date his Report
9 is, but if you say so, I believe it.

10 Q. Did you review Dr. Baillie's Report before
11 issuing your Report?

12 A. (Dr. Calvo) We had--I had an early version--

13 Q. Yes.

14 A. (Dr. Calvo) --and I went through it. But I
15 wasn't looking at soils, so I didn't study the Report
16 to any level of detail.

17 Q. So, you didn't think it would have been
18 prudent to wait a few more days until you had a soil
19 report in order to incorporate what you on your own
20 testimony in your Report said was the principal
21 deficiency of being able to conclude that there is a
22 wetland?

1 A. (Dr. Calvo) The way we interpreted
2 that--Robert and I talked about this--was we will
3 concentrate on what we're good at, and we will let the
4 soils expert concentrate on what he's good at.

5 Q. So, let's go back to the scope of your Report.
6 You're saying whether the Las Olas Project site
7 contains or has ever contained wetlands protected by
8 Costa Rican law, you could not do that in the absence
9 of a soil study; is that correct?

10 A. (Dr. Calvo) And we do not do--we do not say
11 whether there are wetlands or not in our Report
12 either.

13 Q. We'll come to that in a moment.

14 I wonder if you can go to Page 3 of your
15 Report. Can you please read the title of this
16 section? This is on--at the top.

17 A. (Dr. Calvo) "Topography and High
18 Precipitation"--

19 Q. No. Sorry, sir. Above that.

20 A. (Dr. Calvo) "Are there wetlands on-site?"

21 Q. And that's a question; right?

22 A. (Dr. Calvo) Correct.

1 Q. Now, please turn to Paragraph 37 of your
2 Report.

3 Do you have that, sir?

4 A. (Dr. Calvo) Yes.

5 Q. And you say, "In conclusion, the three
6 depressional areas located on the west and northwest
7 sides of Las Olas site show characteristics of a
8 freshwater marsh and are potentially wetlands."

9 Is that right?

10 A. (Dr. Calvo) I say that.

11 Q. And then it continues about the dominance of
12 Mexican crowngrass, evidence of seasonal flooding, and
13 then you talk about soils.

14 A. (Dr. Calvo) Yes.

15 Q. And I would just merely invite the Tribunal to
16 put a little scribble next to Paragraph 37. I won't
17 read it in totality here.

18 Now, you refer to the definition of "wetland"
19 under Costa Rican law, I assume?

20 A. (Dr. Calvo) There is a section in which we
21 summarize the definition, yes.

22 Q. In fact, let's go to Paragraph 30 of your

1 Report.

2 A. (Dr. Calvo) Yes.

3 Q. And here, you refer to the Ramsar definition
4 and how wetlands are areas of marsh, fen, peat, and/or
5 water, and then it continues a little more, which
6 includes static water?

7 Do you see that, sir?

8 A. (Dr. Calvo) I do.

9 Q. And then in Page 4, Paragraph 19 of your
10 Report--

11 A. (Dr. Calvo) Yes.

12 Q. --you include a photograph that is titled
13 "Standing Water"?

14 A. (Dr. Calvo) Yes.

15 Q. And then on Page 5, Paragraph 23, you include
16 a second photograph which shows the extent of the
17 Mexican crowngrass, which is a plant associated with
18 wetlands--

19 A. It is a vegetation in the boundary of--
20 (Overlapping speakers.)

21 BY MR. LEATHLEY:

22 Q. I'm sorry, sir. I -- I'm sorry; I need to

1 finish my question. Apologies.

2 A. Yes. sorry.

3 Q. I appreciate the willingness to answer, but
4 let me finish my question.

5 So, this a Mexican crowngrass, which is a
6 plant associated with wetlands, although as you say in
7 Paragraph 37, it's not determinative in and of itself
8 of wetlands; is that right?

9 A. (Dr. Calvo) I do say that.

10 Q. And, Dr. Langstroff, I saw you nodding. Would
11 you confirm that as well?

12 A. (Dr. Langstroff) I agree. That's correct.

13 Q. Thank you.

14 So, we have evidence indicating that in the 2
15 out of 2 elements under Article VI of the MINAE
16 Decree, there are signs potentially indicating
17 wetlands; would you agree?

18 A. (Dr. Calvo) Potentially.

19 Q. Thank you.

20 Now, let's go to your conclusions at Paragraph
21 75 of your Report.

22 We're going to put Paragraph 37 and Paragraph

1 75 up on the screen.

2 Why do you delete the reference to there being
3 potentially wetlands from your conclusion?

4 A. (Dr. Calvo) Between 37 and 75?

5 Q. Yes, sir.

6 A. (Dr. Calvo) Let me see.

7 I don't recall. I just wrote the conclusion
8 in a more specific way, I guess. But I don't recall
9 that I removed the "potentially wetland" words for any
10 particular reason.

11 Q. Well, the wording is identical but for the
12 conclusion that says, "There are potentially
13 wetlands."

14 A. (Dr. Calvo) Yes.

15 Q. There's no reason why you deleted that?

16 A. (Dr. Calvo) None that I recall.

17 Q. Did you delete it, sir, because you felt it
18 was obvious based on the other conclusions you had
19 found? You found a marsh or a swamp, static water,
20 vegetation associated with wetlands?

21 A. (Dr. Calvo) I don't recall why I deleted it.

22 Q. Do you think it should remain in the

1 conclusion as per Paragraph 37?

2 A. (Dr. Calvo) It is already in the Report, so,
3 it could be under "Conclusion," yes.

4 Q. Can we turn to Article V of the Decree? This
5 is Decree--the MINAE Decree, Tab 2 in your binder?

6 A. (Dr. Calvo) I will let Robert look at that
7 portion--

8 Q. Yes, please. I would like you both to be able
9 to see what you have. Apologies we don't have two
10 copies; that's our oversight.

11 Have you looked at this before?

12 A. (Dr. Langstroff) Yes, I have.

13 Q. Now, in the Spanish version, it reads
14 "Definiciones," and then it defines each of the three
15 factors; is that right?

16 A. (Dr. Langstroff) That's correct.

17 Q. And, Dr. Langstroff, I just want to confirm,
18 you read Spanish?

19 A. (Dr. Langstroff) I do.

20 Q. Thank you.

21 And can you go to the section subparagraph
22 (b), where it says, "Suelos hídricos," hydric soils.

1 A. (Dr. Langstroff) Okay.

2 Q. And can you just read--this is already in the
3 record, so maybe you can just take two seconds to read
4 that for yourself, sir.

5 A. (Dr. Langstroff) Okay.

6 Q. And so, this is saying that hydric soils is
7 defined by reference to hydric soils and hydromorphic
8 soils; is that right?

9 A. (Dr. Langstroff) Hydromorphic soils as used
10 here apparently is a synonym in this particular
11 definition as used in Costa Rica. It appears that's
12 correct.

13 Q. Thank you.

14 Could you please go to Paragraph 16 of your
15 Report?

16 A. (Dr. Calvo) 16?

17 Q. Yes, sir.

18 A. (Dr. Calvo) Yes.

19 Q. Now, I'm going to read the second and the
20 third sentence here.

21 It says: "There was a series of small hills,
22 mainly on the north and central portions at the site,

1 moderate slopes into lower areas create natural
2 drainage features on north, east, south and west of
3 the site."

4 Do you see that?

5 A. (Dr. Calvo) Yes.

6 Q. And then there's a description of the
7 topography of the site in order to determine whether
8 there are wetlands; is that right?

9 A. (Dr. Calvo) A description of the topography of
10 the site?

11 Q. I'm sorry. So, this is a description of the
12 topography of the site.

13 A. (Dr. Calvo) This is a description of the
14 topography of the site as it relates to how the water
15 would move through the site.

16 Q. And this description was based, Dr. Calvo, on
17 your observations at the moment at the site visit; is
18 that right?

19 A. (Dr. Calvo) They were based on both my
20 observations when I was on-site and then the review of
21 the topo map from the Mussio Madrigal drawings.

22 Q. And you refer to the 2008 topographic map of

1 the site prepared by Mussio Madrigal, but you say
2 expressly in this Paragraph 16 that you did not use it
3 for your analysis; is that right?

4 Last few words of Paragraph 16.

5 A. (Dr. Calvo) Yeah, we say we used it as a
6 topographical map. Only as a general reference of the
7 topo characteristics, but did not use it for our
8 analysis.

9 So, yes, we say that.

10 Q. And you don't exhibit it to your Report
11 either, do you?

12 A. (Dr. Calvo) We don't add it into the Report?

13 Q. Yes, it's not attached or appended to--

14 A. (Dr. Calvo) I think there was a figure that
15 may have the topography on it. Perhaps. I don't
16 recall.

17 No, there isn't.

18 Q. That's also my understanding.

19 A. (Dr. Calvo) Yeah.

20 Q. Thank you.

21 Now, please, could you go to Paragraph 19 of
22 your Report.

1 A. (Dr. Calvo) Yes.

2 Q. And here, you're describing the current
3 topographical conditions of the southwest corner of
4 the site; is that right?

5 A. (Dr. Calvo) Yes.

6 Q. And you--you testified a moment ago that
7 the--in fact, you say this in Paragraph 1(b) of your
8 Report, that the objective of your Report was to
9 determine whether Las Olas Project site has ever
10 contained wetlands; correct?

11 A. (Dr. Calvo) Yes, we say that.

12 Q. But although you had to determine whether
13 there ever had been wetlands on the site, you based
14 your findings solely on the conditions at the site
15 based on your visit on the 6th and the 7th of July;
16 correct?

17 A. (Dr. Calvo) And--yes, and on the review of the
18 historical photography from 2002.

19 Q. 2002?

20 A. (Dr. Calvo) And on, yes.

21 Q. "And on;" you mean 2002, and then 2012, and
22 2014.

1 A. (Dr. Calvo) Correct.

2 Q. So, there's a gap of ten years there.

3 A. (Dr. Calvo) Yes.

4 Q. And you did not use the 2008 topographical
5 map, did you?

6 A. (Dr. Calvo) The description here, for example,
7 20 meters above sea level down to 10 meters above sea
8 level are connecting what I saw with the altitude as
9 indicated on the topo map because I could not
10 determine the altitudes on-site by myself.

11 Q. Now, please can you go to the aerial
12 photography, 2005. This is Figure 4 of the Second
13 KECE Report, which I believe is behind Tab--Tab 3.

14 A. (Dr. Calvo) Okay.

15 Q. Do you see that, sir?

16 A. (Dr. Calvo) I do.

17 Q. And on the southwest side of the property,
18 shows a large depressional area at or below 10 meters;
19 would you agree with that?

20 A. (Dr. Calvo) That's what the map says, yes.
21 You can see in this map, but I've seen it in a
22 larger-version map.

1 Q. And you state in Paragraph 19 of your Report
2 that you observed in the southwest site "a gently
3 sloping area," with elevations decreasing from
4 adjacent hills of more than 20 meters to the south
5 portion of the site at about 10 meters; is that right?

6 A. (Dr. Calvo) That's what I say.

7 Q. But you do not address this change and any
8 possible cause of this change in your Report, do you?

9 A. (Dr. Calvo) What change?

10 Q. Well, any change that is being alleged in this
11 Arbitration regarding the fill of the potential
12 wetlands.

13 A. (Dr. Calvo) No, I don't address that. I'm
14 referring to the observation of the gently sloping
15 site, which I could see from where I was standing, and
16 then looking at the topography map, I could see that
17 the elevations, according to the topo map, were moving
18 from 20 meters down to 10 meters, and off the site.

19 Q. And you don't identify anywhere in your Report
20 any analysis or assessment of the change that Mr.
21 Mora, the neighbor, is telling you took place.

22 A. (Dr. Calvo) The only comment that he mentioned

1 that I refer to in the Report is that in the past,
2 before anything happened on that site, the water used
3 to flow out of the site, straight down the road, to
4 the sea.

5 Q. Uh-huh.

6 And you don't do an independent assessment of
7 that change--

8 A. (Dr. Calvo) I did not.

9 Q. So, your Report's a snapshot of the site in
10 July of 2016, essentially.

11 A. (Dr. Calvo) Plus the understanding gained
12 after looking at the three time-series photographs.

13 Q. Right. And so, based a photo from 2002 and
14 then an aerial photo from 2014, you are determining
15 whether there ever has been wetlands on the site; is
16 that right?

17 A. (Dr. Calvo) Yes, and I can explain the
18 observation on the 2002 and why we feel that way.

19 Q. We'll come--

20 A. (Dr. Calvo) Robert reviewed that too.

21 Q. Very good. We'll come on to that in a moment.

22 A. (Dr. Calvo) Okay.

1 Q. Now, did you review the work papers or any
2 documentary evidence from the construction at the
3 site?

4 A. (Dr. Calvo) I did not.

5 Q. And did you review or speak to any
6 construction companies or employees who had been
7 employed at the site?

8 A. (Dr. Calvo) I did not.

9 Q. And did you review any photographs of any
10 construction works that had occurred at the site?

11 A. (Dr. Calvo) The only photographs I've seen
12 that discuss construction and fill and things that
13 have been done on the site were those from the KECE
14 Report.

15 Q. Okay. Thank you.

16 Do you think that those sort of information
17 that I've just described would have been helpful for
18 you to determine whether there had been any change to
19 the land?

20 A. (Dr. Calvo) I don't dispute that there were
21 changes to the land; and yes, I understand that there
22 were changes to the land.

1 Q. Right. But your job, sir, if I may put it
2 this way, was to assess the nature of that change, the
3 cause of that change; but you have no way of
4 understanding whether either change occurred yourself
5 or what was the--what was the reason for that change.

6 A. (Dr. Calvo) I understand the reason for the
7 change in that I have read information and seen
8 pictures of works that have been carried out on what
9 is called Wetland 1 by KECE--

10 Q. That's not what you just testified to.

11 A. (Dr. Calvo) Well, observation from the area
12 photos.

13 Q. Well, sir, you just contradicted yourself
14 within the space of about 30 seconds. You just told
15 me you hadn't seen photographs and you hadn't seen
16 evidence regarding the works or the construction.

17 So, is it now your testimony that you have
18 seen photographs?

19 A. (Dr. Calvo) I believe I said, and the
20 Transcriber can probably tell me if I'm wrong, that I
21 had seen--the only pictures I have seen of works that
22 have been carried out on-site were those in KECE's

1 Reports 1 and 2.

2 Q. I see. So, that's your data set, was from
3 KECE's Report?

4 A. (Dr. Calvo) That's my observation.

5 Q. And so, there's no independent assessment or
6 verification yourself?

7 A. (Dr. Calvo) No.

8 Q. So, sir, your Report doesn't analyze any of
9 the potential filling or the draining of Wetland 1,
10 does it?

11 A. (Dr. Calvo) Not directly, no.

12 Q. Okay. Thank you.

13 I wonder if you can turn to Figure 5 of your
14 Report, please.

15 A. (Dr. Calvo) Of our Report?

16 Q. Yes, sir, of your Report.

17 A. (Dr. Calvo) Oh. I have it right here. Okay.

18 Q. So, that will be behind your Report at the
19 front of the cross-bundle.

20 Now, gentlemen, you identified three
21 depressional areas near the northwest and west corner
22 of the property; is that right?

1 A. (Dr. Calvo) Correct.

2 Q. And you can see that these correspond--and I
3 think we're going to put this up on the screen so you
4 can compare with KECE's Report. KECE 5 would
5 correspond with Depression 3; KECE 3 would correspond
6 to Depression 2; and KECE 2, Wetland 2, would
7 correspond to Depression 1.

8 Would you agree with that?

9 A. (Dr. Calvo) Yes, I do.

10 Q. And they're also referred to in Dr. Baillie's
11 Report as Bajo B2, B4, and B6; would you generally
12 agree with that?

13 A. (Dr. Calvo) Yes.

14 Q. Thank you.

15 Now, let's turn to Paragraph 34 of your
16 Report, please; and here you say, "Based on field
17 observations and document review, the three
18 depressional areas located on the west side of the Las
19 Olas site show some characteristics of wetlands as
20 defined in the Costa Rican regulations. However,
21 without soils analysis, we cannot confirm whether
22 these are, in fact, wetlands."

1 And by "some," you meant two out of three
2 conditions; correct?

3 A. (Dr. Calvo) We referred to vegetation, we talk
4 about Mexican crowngrass, which we have mentioned
5 several times, and we clarify that its presence by
6 itself is not enough; but certainly there's something
7 happening there, so we stipulate to that.

8 And then the site was flooded when I was
9 there, and it rains a lot there, so there's probably
10 water that sits there for a length of time.

11 So, yes, those two characteristics we discuss
12 here.

13 Q. Thank you.

14 I'd like to take you to the Baillie Report.
15 You'd mentioned you'd seen previous drafts. Am I
16 right in thinking you'd seen the final draft?

17 A. (Dr. Calvo) No. I never saw the final draft.

18 Q. Okay. And I wonder if you could go to
19 Paragraph 6, please?

20 A. (Dr. Calvo) 6?

21 Q. Yes, sir.

22 A. Okay. Now, this is a Spanish version. Is

1 that the right one?

2 Q. Oh, I'm sorry.

3 A. (Dr. Calvo) It's okay; I mean, I can read
4 either language. I want to make sure we're on the
5 same page.

6 Q. I'm confused who speaks what these days, sir.
7 So, the translation should also be there,
8 hopefully?

9 A. (Dr. Calvo) Yeah. I'm reading it in English
10 now.

11 Q. Paragraph 6, I'm going to read it, says,
12 "Three of six valleys have gleyed soils, under
13 standing water, and qualify for Class VII or VIII in
14 the land evaluation system of Costa Rica and as hydric
15 by the criteria of MINAE. Two of these valleys are
16 very small, and the other is less than 1 hectare.
17 Works by the investors have not significantly affected
18 these soils."

19 And then I wonder if you can look at Figure 5
20 of the Baillie Report. It's on Page 27.

21 A. (Dr. Calvo) 27, yes.

22 Q. Do you have it there, sir?

1 A. Yes.

2 Q. So, that these three depressions can be
3 considered wetlands because they have met the three
4 requirements contained in Decree--of the MINAE Decree
5 that you mention in Paragraph 33, the two conditions--

6 A. (Dr. Calvo) I do not agree with that as we
7 have looked at more details, especially now with the
8 Second KECE Report, and more specific and yet
9 efficient analysis of vegetation and cover and things;
10 even the vegetation criteria is a little iffy, so I'm
11 not convinced.

12 Q. You're not convinced; but you've identified in
13 your Report hydric conditions and vegetation that
14 could be indicative of wetlands?

15 A. (Dr. Calvo) Correct.

16 Q. And Dr. Baillie, the soil expert, has
17 identified hydric conditions. So, help me out, sir.
18 We have the three criteria. Why are you able to then
19 say there are no wetlands?

20 A. In our Report, when we made that conclusion
21 and discussed that element, we also clarified that
22 *paspalum fasciculatum*, by itself, which is by far the

1 dominant species, based on what I knew at the moment
2 and the First KECE Report, is not sufficient to make
3 sure or be sure that the vegetation is hydrophilic.

4 Q. But the Mexican crowngrass can and does, in
5 certain circumstances, grow in wetlands; correct?

6 A. (Dr. Calvo) It does. It also grows in no
7 wetlands.

8 Q. Understood, sir.

9 A. (Dr. Calvo) Yes.

10 Q. So, for you, the glass is half empty, and for
11 me, the glass is half full; would you agree?

12 A. (Dr. Calvo) I'm not talking about water in
13 glass, but we have different interpretations, yes.

14 Q. We are in agreement, it seems, that Mexican
15 crowngrass can potentially, and does, in reality, grow
16 in wetland areas. And your testimony, which I don't
17 think is disputed, is that what Mexican crowngrass can
18 potentially and does grow in nonwetland areas.

19 A. (Dr. Calvo) That is correct.

20 Q. Okay. Thank you, sir.

21 Now, you were shown three site plans by the
22 Claimants when you prepared your Report?

1 A. (Dr. Calvo) Yes. When I was in Costa Rica, I
2 had three large-size printouts.

3 Q. Now, two of them are behind Tabs 9 and 10 in
4 your cross-binder.

5 A. (Dr. Calvo) Okay. 9 and 10?

6 Q. Now, Dr. Langstroff--sorry, I'll give you a
7 chance just to get--just have a quick look and see if
8 you can remind--these were provided--Members of the
9 Tribunal, last night--I'm losing track of time now,
10 but I think it was last night by Claimants' counsel.

11 Could you just confirm if those are two of the
12 three plans that you had seen--

13 A. (Dr. Calvo) I cannot read the fine print
14 because it's too small, but the name of the file, L48
15 and L49, as of what I saw last night, do correspond to
16 two of the three drawings that I had seen.

17 Q. Okay. Thank you.

18 Now, Dr. Langstroff, you did not review these
19 three plans, did you?

20 A. (Dr. Langstroff) That's correct. I did not.

21 Q. Now, in Paragraphs 41 to 44 of your Report,
22 you refer to those site plans.

1 A. (Dr. Calvo) Correct.

2 Q. And you say in Paragraph 44 that the areas of
3 depressions are outside the development areas in the
4 easement areas; is that right? I'd just like you to
5 read what Paragraph 44 says.

6 A. (Dr. Calvo) What I say in Paragraph 44 is that
7 the site plan, which is the third drawing--it's not
8 quite here--but I can comment on that
9 drawing--generally, that's the wording I use,
10 generally avoiding encroachment into Depressions D1
11 and D3, which corresponds to Wetlands 2 and 5.

12 Q. Right. Thank you.

13 And your point is that even if there were
14 wetlands on this area, the fact is there's been no
15 development on those areas means that it's less of a
16 concern to you, essentially.

17 A. (Dr. Calvo) The point was that those areas,
18 for whatever reason, the master planners found
19 appropriate to basically avoid with lots and other
20 construction of structures.

21 Q. And so, with your environmentalist hat on,
22 that would give you some comfort that accommodation is

1 being made of these areas; is that right?

2 A. (Dr. Calvo) Yes. And, also, I would add that
3 these areas also represent natural drainage areas
4 where the water would flow into. So, from the master
5 planning work that I have participated in in the past,
6 you take advantage of that type of feature to make
7 sure that the water runs in the right direction.

8 Q. Okay. Thank you.

9 MR. LEATHLEY: Now, I would ask the Tribunal
10 to keep a thumb or a pen or a piece of paper in those
11 two maps because we're going to do a little exercise
12 of compare and contrast.

13 BY MR. LEATHLEY:

14 Q. Please take a look at the image which is now
15 on the screen. And this is the Master Site Plan from
16 September the 17th, 2008. This, for the record, is
17 C-54.

18 Do you see that, sir?

19 A. (Dr. Calvo) I do.

20 Q. Now, this is Mr. Mussio's Master Site Plan.
21 And you can see in the left-hand corner--the bottom
22 left-hand corner the name of Mussio Madigral. This is

1 the architect's name--the firm name.

2 A. (Dr. Calvo) Yes.

3 Q. Is that right, sir? Bottom left.

4 A. (Dr. Calvo) Yeah.

5 Q. And just to be clear, sir, C-54 is described
6 by the Claimants in the Memorial Paragraph 84--and I
7 just do this for the record, if I may--as "the Master
8 Site Plan which would later be used to apply for the
9 Environmental Viability for the Condominium Section of
10 the Project."

11 I'm not asking you to comment on that, sir.
12 It's just an observation. But I'm now going to put
13 this Master Site Plan over your findings of--your
14 findings and those of Dr. Baillie and KECE.

15 This, for the record, came from the opening
16 submission during the presentation.

17 And so, there, sir, you can see the Master
18 Site Plan sitting on top of the findings that have
19 been located by you, by KECE, and by Dr. Baillie.
20 Would you agree with that?

21 A. (Dr. Calvo) It seems to be. Yeah. First time
22 I have seen it, but it looks like that is what you

1 have done.

2 Q. Now, let's look back at the maps that you had
3 at L-48 and L-49. So, you took comfort, sir, from the
4 plans that you were shown at the time when you visited
5 Costa Rica, that those L-48 and L-49 plans were
6 accommodating the areas that you had identified?

7 A. (Dr. Calvo) I did not take comfort. I just
8 made the observation that the plan generally avoided
9 encroachment into those areas.

10 Q. Thank you.

11 MR. LEATHLEY: So, let's go back, Mike, to the
12 other illustration we just had with the Master Site
13 Plan.

14 BY MR. LEATHLEY:

15 Q. And can you see the proposed construction over
16 those areas?

17 A. (Dr. Calvo) I see the lots, the streets, and
18 what seems to be lots on the easement areas as well.

19 Q. So, would you agree with me, sir, that based
20 on this document, which is the Master Site Plan, that
21 there would be development and construction over these
22 areas that you, Dr. Baillie, and KECE have identified?

1 A. (Dr. Calvo) Seeing it from here, it appears as
2 if there--I think those are lots on the yellow areas
3 in the easements, I guess.

4 Q. You're aware of the easements, sir?

5 A. (Dr. Calvo) Vaguely. I don't understand the
6 legality of the easements.

7 Q. Okay.

8 A. (Dr. Calvo) But it seems to show lots perhaps
9 in there.

10 Q. Let's go to another map, sir. This is a map
11 that Mr. Mussio exhibited to his witness statement.
12 This is Tab 13 in your bundle.

13 A. (Dr. Calvo) Okay.

14 Q. This was the last page of Mr. Mussio's
15 statement. Are you familiar with this map?

16 A. (Dr. Calvo) No, I've never seen it.

17 Q. And would you note, sir, and would you agree,
18 sir, that the Claimants here were also proposing to
19 construct over one of the areas that you had
20 identified, Area Number 1?

21 A. (Dr. Calvo) On this scale, it is hard to see.

22 Q. Would you agree with me that it's--well,

1 I--let's go back.

2 MR. LEATHLEY: Mike, let's go back to the--

3 BY MR. LEATHLEY:

4 Q. So, you see the areas identified there, sir?

5 A. (Dr. Calvo) Specifically to that area next to
6 the road?

7 Q. You see the top left? So, it's the highest
8 point in the entire map.

9 A. (Dr. Calvo) I can see the area that you're
10 referring to.

11 Q. Yes.

12 A. (Dr. Calvo) I mean, I know what you're talking
13 about.

14 Q. Yes.

15 A. (Dr. Calvo) But on this scale, I really have a
16 hard time telling what's going on the map.

17 Q. Let's go back to the--Mr. Mussio's--

18 A. (Dr. Calvo) Maybe we could have the printout.

19 Q. Yes. Well, okay.

20 A. (Dr. Calvo) I'm not sure.

21 Q. Let's go back to Mr. Mussio's map.

22 You see the angle of the--the orientation of

1 them is slightly different. But would you agree that
2 the top left is sort of--it's almost like a fork--but
3 the top left prong, where there's a Number 1 in a
4 circle, that's identified by Mr. Mussio as a sensitive
5 area?

6 A. (Dr. Calvo) I don't see it clear enough to
7 understand exactly what's on that circle, Number 1.

8 Q. Okay. But can you see underneath it that
9 there's construction proposed?

10 A. (Dr. Calvo) That's what I'm saying. That I
11 don't see it clearly enough to know what's there.

12 Q. Okay. And I wonder if I can just make one
13 clarification. I'd like to show you now a document
14 which is C-222. This is behind Tab 14 of your
15 report--of your bundle.

16 A. (Dr. Calvo) Okay.

17 Q. Now, this is an actual fact, the plan that was
18 submitted with the D1 Application. Are you familiar
19 with the concept of a D1 Application?

20 A. (Dr. Calvo) Vaguely. I understand that it was
21 a form that is used to apply for a permit, I believe.

22 Q. And so, this was submitted. But this notably

1 removes the easements because it was for the
2 Condominium Section. I don't ask that as a question.
3 I think it would be unfair to put that as a question
4 to you, but I'm just making an observation for the
5 record.

6 A. (Dr. Calvo) Okay.

7 Q. In Paragraph 76 of your report, you testify
8 that in the southwest corner, which is KECE Wetland
9 1--I'm sorry, sir. I've forgotten a question I
10 meant--I need to ask you, going back to Mr. Mussio's
11 plans.

12 A. (Dr. Calvo) Which is under 14? Found it.
13 Okay.

14 Q. And I just want to be clear on your testimony.
15 The three plans that you were shown include L-48 and
16 L-49 and then one more; is that right?

17 A. (Dr. Calvo) Correct.

18 Q. Okay. Thank you.

19 Now, in Paragraph 76 of your report--

20 A. (Dr. Calvo) Yes.

21 Q. --you testify that in the southwest corner,
22 which is KECE Wetland 1, there is not a wetland; is

1 that correct?

2 A. (Dr. Calvo) That's what we say.

3 Q. Of course, this is the wetland you say in
4 Paragraphs 35 and 76 is the subject of the dispute in
5 this case; correct?

6 A. (Dr. Calvo) I understood that there's a
7 dispute around the filling and construction of the
8 areas, yes.

9 Q. Although, you're aware that there are other
10 wetlands identified by KECE in Mr. Erwin's study;
11 correct?

12 A. (Dr. Calvo) Yes, sir.

13 Q. Now, were you told that the dispute included
14 the allegation of filling wetlands?

15 A. (Dr. Calvo) Was I told?

16 I read it in some documents.

17 Q. So, you were aware before the time of your
18 report that there was an allegation of a filling of
19 the wetlands?

20 A. (Dr. Calvo) Yes.

21 Q. But you don't mention the word "fill" anywhere
22 in your report?

1 A. (Dr. Calvo) I don't.

2 Q. And you don't analyze the prospect or the
3 possibility that there was filling anywhere in your
4 report?

5 A. (Dr. Calvo) Besides the discussion we had
6 earlier regarding seeing pictures of the work from
7 KECE's Report and reviewing the historical
8 photography.

9 (Pause.)

10 MR. LEATHLEY: I'm sorry, sir. I'm just
11 checking which questions remain for me to ask.

12 Thank you. I don't have any further
13 questions.

14 PRESIDENT SIQUEIROS: Okay. Mr. Burn.

15 MR. BURN: No questions, sir.

16 PRESIDENT SIQUEIROS: Mark?

17 QUESTIONS FROM THE TRIBUNAL

18 ARBITRATOR BAKER: Just one. As I understand
19 the basic conclusion that you have reached, it is that
20 you defer, essentially, on the final question of
21 wetlands to the soils experts, that you have provided
22 us with evidence that shows the chart of the plants

1 that could be used to characterize wetlands or
2 nonwetlands, but that the final determination rests
3 with the soils expert. Is that a correct
4 understanding?

5 THE WITNESS: (Dr. Calvo) It is partially
6 correct, sir. Since we wrote this report, we also
7 have now seen the second KECE Report. So, there are
8 two sides to what we are looking at.

9 One is that on the site, particularly those
10 shadow areas, there are some suggestive
11 characteristics of wetlands. We are not convinced
12 that *Paspalum fasciculatum* really answers the question
13 from the vegetation side. We did not attempt to
14 answer the soil side. So, in that sense, yes.

15 ARBITRATOR BAKER: Right. So, my
16 understanding is correct, then, that it's an
17 indication of the plant life. It's not dispositive,
18 but it's an indication. And, therefore, in order to
19 make the final determination, if we make all three,
20 you have to look to the soils analysis; is that
21 correct?

22 THE WITNESS: (Dr. Calvo) That is correct.

1 And only to add for the observation on the second KECE
2 Report, the more we looked at their analysis, the
3 weaker the evidence on vegetation became to us.

4 THE WITNESS: (Dr. Langstroth) Right. I'd
5 like to add, if I may, that you're correct. In
6 indicating that there are--Dr. Calvo is correct in
7 indicating that there are two sets of conclusions, one
8 being the conclusions of our report, and the second
9 set of conclusions presented in our opening
10 presentation based on analysis of significant
11 additional data presented by the second KECE Report.

12 And in terms, again, of your question, I
13 believe that I would say our final conclusion does not
14 depend upon the analysis of soils. As--again, as
15 you've illustrated and everybody is aware of, we must
16 have all three conditions: hydrophilic vegetation,
17 hydric soils, and hydric condition.

18 The absence of hydric vegetation would mean we
19 don't need to know any soils information because we
20 need to have all three. And my analysis of the
21 available plant species lists and coverage data do not
22 permit a conclusive determination that the polygons

1 delimited represent wetlands based solely on the
2 hydrophilic vegetation criteria.

3 ARBITRATOR BAKER: Thank you, Chairman.

4 PRESIDENT SIQUEIROS: I have no questions,
5 Dr. Langstroth and Dr. Calvo.

6 MR. LEATHLEY: Sir, I do have a follow-on
7 question from Mr. Baker's question.

8 PRESIDENT SIQUEIROS: Please.

9 RE-CROSS-EXAMINATION

10 BY MR. LEATHLEY:

11 Q. Gentlemen, Mr. Baker used the word
12 "dispositive" in his question. And this seem to me to
13 go to the core of this analysis.

14 You've testified today that you did identify
15 potential evidence of hydric conditions and hydric
16 vegetation. That was where we concluded.

17 Based on that--and let's assume that there
18 were only two criteria. We'll put the soils to one
19 side because that's beyond the scope of your report.

20 Notwithstanding the fact that you could
21 conclude, for example, that Mexican crowngrass does
22 not grow--sorry--doesn't only grow in wetlands, it

1 grows in other environments as well, what is the
2 orientation of whether--of the question of whether it
3 is dispositive?

4 Would one err on the side of identifying a
5 wetland, or would one err on the side of not
6 identifying a wetland? And it's a very important
7 qualification for the purposes of protecting the
8 wetland.

9 A. (Dr. Calvo) Let me start with a comment.
10 First, I wouldn't want to err on the other side. We
11 would like to find sufficient information to make the
12 right decision.

13 And my claim is that sufficient information to
14 make a final decision, even on those two parameters,
15 has not been, even at this point, completed.

16 After the first KECE Report and my
17 observations on the site, our report concludes that it
18 looks like the vegetation could meet the criteria.
19 After the second report, where more data was produced,
20 actually, that observation became weaker.

21 Now we're less convinced that even the
22 vegetation truly represents a preponderance of

1 hydrophilic vegetation as defined in the Costa Rican
2 law.

3 Q. So, I have two follow-up questions from that,
4 if I may. The first is you've used this word a number
5 of times in your presentation, and you've just used it
6 now. "Preponderance" means the majority.

7 And you do not need to find the majority of
8 species under any of the legislation in order to
9 determine a wetland; is that right?

10 A. (Dr. Langstroth) Under the Costa Rican
11 legislation, that is correct. There is no--there is
12 no criterion that says "preponderance of" because the
13 criterion itself does not relate to a list of species
14 or an abundance of different types of plants. It
15 specifically relates to the presence of hydrophilic
16 vegetation, which is defined by the presence of what
17 they define in Paragraph 5 as hydrophilic plants,
18 which are plants whose life cycles are associated with
19 aquatic conditions, particularly reproduction, and
20 also that have structural adaptations to life under
21 such conditions. That is what is stated, paraphrased,
22 in Paragraph 5 or, I should say, Article 5 of the

1 MINAE Decree.

2 Then Paragraph or, I should say, Article 6
3 then establishes that there are three necessary
4 conditions at a site. The first being hydrophilic
5 vegetation. And then it sort of redefines hydrophilic
6 vegetation again as that vegetation types associated
7 with aquatic and semiaquatic environments.

8 And so, I agree that there is no attempt in
9 the Costa Rican legislation to state that there has to
10 be 51 percent or any other number--any other sort of
11 numerical preponderance or dominance of species.
12 Rather, it specifically--specifically depends on a
13 type of vegetation.

14 And, again, vegetation is something that is
15 comprised of a number of individual plants living
16 together in a certain habitat. And these plants may
17 be from one or many, many species living together.
18 And in order to be hydrophilic vegetation, there
19 should be some evidence that hydrophilic plants--we
20 would--again, whether you want to say "dominate" or
21 "have a preponderance"--or when we have a condition
22 where we have both upland species in a polygon, when

1 we have polygons delineated that include dry forest
2 trees, mature dry forest trees, it is very difficult
3 for anybody to come to a conclusion that that polygon
4 as delineated can be called a wetland without much
5 more additional information.

6 And so, I--

7 Q. So, to clarify, sir--because I'm afraid this
8 doesn't settle it for me. You said "some evidence,"
9 and then you qualified yourself with "dominate" or
10 "preponderance," but you've already admitted that the
11 law and no requirement exists that there be a
12 preponderance.

13 So, can we just clarify step by step?
14 "Preponderance" is a term that you import into this
15 analysis; is that right?

16 A. (Dr. Langstroth) "Preponderance" is a term I
17 import into the analysis based on the application of a
18 modification, a--a hybridization of a North American
19 USDA approach to identifying species as either
20 wetland, upland, or some intermediate category.

21 And so, by implication, I believe that the
22 attempt of the KECE 2 Report to present botanical

1 data, present percent coverage, by implication,
2 states--shows us that there's something important
3 about percent coverage, and there's something
4 important about the number of species.

5 Now, we know that the KECE Report does not
6 conclusively state that there is a preponderance or a
7 dominance of wetland species because none were found.
8 There was no such preponderance found.

9 And, again, I refer you back to Paragraphs 18
10 through 25 of the KECE Report where we are misled by a
11 statement--a series of statements that say that these
12 sites have wetland species and wetland vegetation of X
13 percent cover.

14 But when we look at the data, we're finding
15 that the W and the W/U species are being grouped
16 together, and I cannot find that to be conclusive
17 evidence, especially in a legal proceeding. I do not
18 believe that that is an adequate level of evidence.

19 A. (Dr. Calvo) And if I may add back to the
20 definition. The definition of "hydrophilic
21 vegetation" in the Costa Rican legislation is very
22 specific. They specifically talk about plants that

1 are dependent on the aquatic environment, especially
2 for the reproduction.

3 So, the definition itself is very restrictive.
4 And what we have found is that the list of species,
5 and many--I couldn't tell you how many--we could do
6 the analysis--of the W/U species, including species
7 like cecropia peltata, I assure you those
8 species--many of those have no adaptation for aquatic
9 life, have no affinity for aquatic life, and are not
10 hydrophilic vegetation.

11 And that's why, after we read the second KECE
12 Report, our confidence on the vegetation side of the
13 equation was shot.

14 Q. And if I may, because this is very
15 interesting, sir.

16 So, I want to go back to one of the other
17 questions because we'll leave--Mr. Erwin is here, and
18 so I will leave him to also respond on some of these
19 issues.

20 You said, Dr. Calvo, in response to the
21 original question that you would not want to err, and
22 I appreciate that for these circumstances.

1 Do you think--which way should an official who
2 is charged with the protection of the environment
3 under the precautionary principle--which way should
4 they err? Should they err in finding--in ignoring
5 potential wetlands or should they err in favor of
6 finding a potential wetland?

7 A. (Dr. Calvo) They should try not to err. I'm
8 sorry, I responded real quick.

9 Q. No. I'm giving you the fact set. I don't
10 want you to change my parameters.

11 In a situation where you have a potential
12 wetland and you have an obligation to protect the
13 wetland--

14 A. (Dr. Calvo) I have never worked in government.
15 So, I'm not going to put myself in that position. I
16 believe--

17 Q. I'm putting you in that position.

18 A. (Dr. Calvo) I believe--I believe that as a
19 government official, I would probably say, "You show
20 me that there are not wetlands because I am believing
21 that there are given the preponderance of
22 information."

1 Q. And in waiting for that--if that were
2 requested, what would you do as an official? Would
3 you allow construction to continue on the wetland, or
4 would you suggest it be suspended?

5 A. (Dr. Calvo) Again, that's a hypothetical. I
6 have never been on the government side. Unless you,
7 Tribunal, make me answer that question, I don't have
8 an opinion.

9 Q. But what is your protest to answering that
10 question?

11 A. (Dr. Calvo) That I have never been in that
12 position from the regulator side.

13 Q. Understood. And I'm not asking it from a
14 regulator's--I'm not asking you to assume
15 responsibility. I'm asking you as someone who is
16 familiar with these ecosystems.

17 A. (Dr. Calvo) Yeah.

18 Q. Which way would you err?

19 A. (Dr. Calvo) If I am an administrator in a
20 regulatory agency and there is sufficient indication
21 that there may be wetlands there--first, as I said, I
22 would ask that the demonstration be made that there

1 isn't. And while that decision or that data is
2 produced, I would probably sit on any decision.

3 Q. You would what? Sorry.

4 A. I would sit on the decision. I would not make
5 a decision allowing the continuation of works that
6 could affect, but we don't know whether it's a wetland
7 or not.

8 Q. So, you would suspend the construction?

9 A. If there was construction already happening,
10 perhaps, yeah.

11 MR. LEATHLEY: Okay. Thank you very much. I
12 don't have any other questions.

13 PRESIDENT SIQUEIROS: Okay. Thank you,
14 Dr. Langstroth and Dr. Calvo. You are released as
15 expert witnesses.

16 So, it's now a little bit past the time to
17 break for lunch. But I think it is now appropriate
18 that--1:30. And should we start then at 2:30? Thank
19 you.

20 MR. BURN: Sir, just for your information, I
21 believe, but Mr. Leathley will tell me if I'm wrong,
22 that we will be beginning with Priscilla Vargas and

1 then I think moving to Mr. Erwin after that in terms
2 of order. Just--just to manage expectations, you will
3 only see Priscilla Vargas fleetingly. We will be
4 extremely brief.

5 PRESIDENT SIQUEIROS: Thank you.

6 (Whereupon, at 1:30 p.m., the Hearing was
7 adjourned until 2:30 p.m.)

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AFTERNOON SESSION

1
2 PRESIDENT SIQUEIROS: If the Court Reporters
3 and Interpreters and the Parties are ready to proceed,
4 then we will proceed with Ms. Priscilla Vargas.

5 PRISCILLA VARGAS, RESPONDENT'S WITNESS, CALLED

6 PRESIDENT SIQUEIROS: And, Ms. Vargas, are you
7 going to testify in English or in Spanish?

8 THE WITNESS: Spanish.

9 PRESIDENT SIQUEIROS: Español. Muy bien.
10 Muchas gracias.

11 You have perhaps seen in the room as other
12 experts have been making their presentations.
13 Nonetheless, I'd just like to reconfirm the procedure.
14 After your examination to confirm your statement as an
15 expert, you will be cross-examined by counsel for the
16 other side. And once that has been completed, the
17 parties that offered you as witness' expert will make
18 some additional questions, but they will focus
19 entirely on the cross-examination that has been
20 carried out by the counterpart.

21 Any doubt that you may have concerning the
22 question asked, you can obviously request

1 clarification. And if you would like to make any
2 clarification following your answer to the question,
3 you may do so immediately following your response.

4 Lastly, as you must have noticed, there is a
5 simultaneous interpretation during this hearing from
6 both English into Spanish and Spanish into English.
7 In addition, there is a transcription.

8 So, there could be some delay between question
9 and answer. And perhaps you should allow a few
10 seconds to elapse after a question or an answer before
11 continuing. This will make it much easier for the
12 Court Reporters and for the Interpreters.

13 THE WITNESS: Very well, sir. I'll make my
14 best effort.

15 PRESIDENT SIQUEIROS: Lastly, I'd like you to
16 please read a statement that you'll find on the table
17 in front of you concerning your statement today.

18 THE WITNESS: "I solemnly declare upon my
19 honor and conscience that my statement will be in
20 accordance with my sincere belief."

21 PRESIDENT SIQUEIROS: Thank you very much.

22 MR. LEATHLEY: Thank you very much,

1 Mr. President.

2 DIRECT EXAMINATION

3 BY MR. LEATHLEY:

4 Q. And good afternoon, Ms. Vargas.

5 Would you please start by confirming that
6 there is a copy of your statement for this
7 arbitration, that it is in the file, in the binder?

8 A. Yes. But I do see that there are some figures
9 attached here. They're not actually part of my
10 report. My report goes through until Paragraph 96.

11 Q. Thank you very much.

12 Are there any corrections that you'd like to
13 make right now?

14 A. Yes. The first is general. When talking
15 about the environmental fragile areas, it says, "in
16 law," but it's actually in the regulations because
17 it's an executive decree and not a law. That's my
18 first comment.

19 Second, Footnote 17, Paragraph 21, the correct
20 citation would be the Environmental Organic Law and
21 not the Wildlife Conservation, which is the one that
22 is mentioned in this footnote.

1 In Paragraph 41, the word "implicitly" is to
2 be deleted. In 42, delete the sentence, "SETENA does
3 not require anything implicitly."

4 And in 97 delete, "yet another obligation the
5 Claimant failed to meet."

6 MR. LEATHLEY: I'm just going to give
7 everybody a chance just to make those changes.

8 (Pause.)

9 BY MR. LEATHLEY:

10 Q. Ms. Vargas, this is--before you give us your
11 presentation, could you explain a little bit about
12 your professional expertise?

13 A. I'm an industrial engineer, and I have a
14 master's degree in environmental engineering. My
15 entire life, since I studied industrial engineering, I
16 have been working in environmental matters. This has
17 allowed me in 1984 to begin working with a prior
18 version to SETENA, which is an inter-institutional
19 commission that was created to study environmental
20 impact.

21 I was then around for the creation of SETENA
22 and began working with the first versions of the

1 SETENA regulation. I have seen the evolution of this
2 to educate a country to have environmental evaluation
3 procedures in place, to refine those regulations. The
4 first version was not as refined as the current one.
5 We had to regulate. We had to specify. We had to go
6 into details.

7 So, I lived through the entire process
8 supporting essentially foreign investors who come to
9 work in the country. Costa Rica has a significant
10 economic area of foreign direct investment. Moreover,
11 there's an agency; it's called CINDE. You have
12 perhaps heard about it. But their goal is to attract
13 foreign direct investment. And frequently I receive
14 foreign investors and explain to them all the
15 environmental impact assessment process. And if they
16 decide to stay in the country, support them as they
17 obtain their permits in order to set up shop and, if
18 necessary, support them in their daily activities once
19 they start up in the country.

20 Likewise, with local enterprise--could be from
21 manufacturing enterprise, large-scale agriculture,
22 real estate development, tourism, hotels and even more

1 complicated issues such as highways, airports, or fuel
2 depots. So, we have done a lot of work in
3 Environmental Impact Assessments.

4 MR. LEATHLEY: Thank you very much.

5 Perhaps you could now give us your
6 presentation. And with the Tribunal's permission, I
7 will let you know when you're 15 to 20 minutes into
8 your presentation because we are under time
9 constraints. Thank you.

10 DIRECT PRESENTATION

11 THE WITNESS: I would just like to state that
12 the presentation is in English because--that's to help
13 most of the participants, but I will be explaining and
14 providing my statement in Spanish.

15 The scope of my work was based on reviewing
16 the information provided by Mr. Aven and his team--in
17 other words, Claimants--to see if it was
18 comprehensive, if it was complete, and if it followed
19 the environmental assessment procedures that are in
20 place for a developer.

21 In SETENA, we call--we use the term
22 "developer" for whoever proposes a project and to see

1 if they were in compliance and how it compares with
2 what they should be doing.

3 In order to do this, my work begins with a
4 review of the Environmental Viability files presented
5 to SETENA by Claimants. Part of the research also
6 encompasses--and COMEX provided me a comment of
7 Exhibit 54. That was the entire design--the master
8 plan that the Claimants presented as their
9 development.

10 So, then we come to the second section on this
11 slide, and we found that some of the Project area did
12 not have the Environmental Viability. And this has
13 been discussed--and I want to point it out because it
14 is truly a relevant aspect for my analysis.

15 What you see on the screen right now shows in
16 blue and yellow--blue is the condominium file, which
17 is perhaps the one we've discussed at length because
18 that is precisely where part of the--there is some
19 evidence of wetlands or potential wetlands, and you
20 know all about these problems.

21 In yellow it's the hotel. The different tones
22 of red--you'll find that there are five blocks. These

1 are sectors for which there was no EV.

2 That red circle shows the area where some
3 construction work took place contrary to other areas.
4 And this was the beginning of construction without
5 having an EV. And here I need to cite Article 2 of
6 the regular procedure process of SETENA.

7 MR. BURN: I apologize. I have to put down an
8 objection. This pack goes way beyond--way beyond
9 Ms. Vargas' report. The purposes of presentation was
10 to give a summary of the evidence in chief and to
11 address those matters.

12 This goes considerably beyond that, and we do
13 not accept it as right or proper.

14 MR. LEATHLEY: Well, Mr. President I would
15 merely remind Mr. Burn we heard this morning of a
16 supplementary from Dr. Baillie which was responsive to
17 reports which had already been on the record. So--

18 MR. BURN: Those were comments basely made--he
19 may have used the word "supplementary." But those
20 were just comments based on the last filing from the
21 evidence from the other side. This--this is
22 entirely--this is all new. This is all new.

1 MR. LEATHLEY: Well, we also heard fresh
2 testimony from Mr. Ortiz on areas of law which were
3 not part of his report which the Tribunal admitted in
4 relation to the Maritime Zone. And Dr. Baillie may
5 well have been responding to KECE, but the procedural
6 order had not invited him to respond to Mr. Erwin.
7 So, I would respectfully submit this is only
8 consistent with the practice which we have been
9 following during the course of the week, sir.

10 MR. BURN: Sorry, sir. I have to object. I
11 mean, just as we go through--I mean, this is
12 ridiculous that we are looking at stuff that is
13 absolutely beyond the scope of this report. I mean,
14 not just by a little bit. Not just updating an
15 opinion the way that Dr. Baillie did to reflect what
16 is before you, just reflecting on material that is
17 before you.

18 This is entirely new material. This is
19 procedurally improper. We are not in a position to
20 respond to this on the hoof from this person.

21 MR. LEATHLEY: And, Mr. President, I would
22 merely reflect that everything that is referenced in

1 this presentation is sourced from the record, and
2 every comment is sourced from her expertise which is
3 being scrutinized today. So, if Mr. Burn has a
4 question, then he can absolutely cross-examine
5 Ms. Vargas on it.

6 MR. BURN: No. No. I'm sorry, sir. There is
7 one choice. Either we terminate this presentation now
8 or Ms. Vargas goes away, prepares a supplemental
9 report, in which she's perfectly welcome to address
10 these matters.

11 It's not up to us to cross-check all of this
12 material against the file to make sure that she is
13 within or without the scope of her original evidence.
14 We've arrived prepared to deal with her report. And
15 it is entirely inappropriate that we are being
16 ambushed in this way.

17 Either she does not present this at all and
18 all the copies are withdrawn and taken away and no
19 account is taken or Ms. Vargas is withdrawn for
20 current purposes, the Respondent considers its
21 position, and we will--we will consent to a
22 supplemental or an amended report if they so choose.

1 But this, it goes way beyond the line.

2 MR. LEATHLEY: I'm sorry, Mr. President. This
3 is, quite frankly, absurd. Now, Mr. Burn can get
4 quite excited about hearing a presentation he's not
5 comfortable hearing. But let's consult the table of
6 contents of Ms. Vargas' expert report which is on the
7 record.

8 And everything I can explain and Ms. Vargas
9 can confirm--I think we should hear from her--about
10 the scope. And she can happily confirm to the
11 Tribunal whether everything that she plans to talk
12 about in this, first of all, number one, is sourced
13 from the record. If it is not, we would be very happy
14 to withdraw it. Number two, if the scope is within
15 the scope of her testimony.

16 But for Mr. Burn, if I may say, to
17 preemptively anticipate that all of this is outside of
18 her report without having heard her is a little
19 premature.

20 PRESIDENT SIQUEIROS: The procedural order
21 stated that demonstrative materials could be used
22 provided that it was a reflection of what's already on

1 the file.

2 If the information that is in this--in these
3 slides is information that is already in the file,
4 then we can proceed, even though the slides themselves
5 are new and have not been previously shown. But
6 it--the supposition, the requirement is that the
7 information itself is already in the file.

8 So, if you can identify that this information
9 is already in the file even though the slides have
10 been newly prepared for her presentation, then we
11 proceed. Otherwise Mr. Burn does have a proper
12 comment on the subject.

13 MR. LEATHLEY: I can certainly confirm that,
14 sir, and I'd be happy to leave Ms. Vargas to confirm
15 the same. But that's absolutely my understanding,
16 that everything that is in this presentation is
17 sourced from the record and from her report.

18 PRESIDENT SIQUEIROS: If you will allow us a
19 second.

20 MR. LEATHLEY: Yes, sir.

21 (Tribunal conferred.)

22 MR. LEATHLEY: Mr. President, we have

1 confirmed that everything is the--either a
2 demonstrative or it is already sourced in the record.

3 PRESIDENT SIQUEIROS: Okay. Let me just
4 remind the Parties, that under Procedural Order Number
5 5--

6 ARBITRATOR BAKER: Mike.

7 PRESIDENT SIQUEIROS: Let me just remind the
8 Parties that under Procedural Order Number 5 of
9 November 25th, 2016, Section 36 makes reference
10 precisely to what we have in front of us.

11 And it provides the ability to submit
12 demonstrative exhibits. There is one requirement that
13 states in that section that each party shall number
14 its demonstrative exhibits consecutively and indicate
15 on each demonstrative exhibit the number of the
16 document from which it is derived.

17 At the beginning of the respective
18 presentation in the hearing, the Party submitting such
19 exhibits shall provide them in hard copy to the other
20 Party, the Tribunal Members, the Tribunal Secretary,
21 the Court Reporters and Interpreters, and subsequently
22 send them by email to the Secretary and the other

1 parties in electronic format. So--

2 MR. BURN: Sir, I would also respectfully
3 refer you to Paragraph 26(2) which stipulates that
4 experts giving oral evidence shall first give a brief
5 summary of their report followed by brief direct
6 examination.

7 My point is not only that there is a danger
8 that there is new material in this--perhaps
9 Mr. Leathley is right to say that it is all derived.
10 It is very difficult to check immediately whether
11 that's right or not. But it is beyond that. There
12 are--I can see that there are--for example, the
13 section near the end called "Supplementary
14 Information" with a slide headed "ESIA v. PGA," that
15 is not covered in Ms. Vargas' report.

16 This is--the presentation is simply a device
17 to summarize--

18 MR. LEATHLEY: I'm afraid--I'm sorry.

19 PRESIDENT SIQUEIROS: Please allow him to
20 finish.

21 MR. LEATHLEY: I have to clarify a few points,
22 yes.

1 PRESIDENT SIQUEIROS: Yes, but please allow
2 Mr. Burn to finish.

3 MR. BURN: Well, I essentially have finished,
4 sir. But the concern is not only as to its status as
5 a demonstrative, although the extent of the
6 presentation does make it very difficult to check
7 whether Paragraph 36 has been complied with, but it is
8 beyond that. And I only give the reference I did by
9 way of example. That, actually, Ms. Vargas is going
10 beyond her report.

11 PRESIDENT SIQUEIROS: Mr. Leathley.

12 MR. LEATHLEY: Absolutely, Mr. President. I
13 have absolutely no idea how this has become an
14 exceptional case.

15 Ms. Vargas is about to present her report.
16 Everything that is in this demonstrative--in this
17 presentation is either a demonstrative, which is to
18 say a visual representation of a point that she wishes
19 to make which is derived from her report, or it is an
20 illustration such as what is behind you at the moment,
21 which is an extract from a document where we've been
22 very diligent in citing every single document in these

1 examples so they can verify its content.

2 In the one slide that Mr. Burn has identified
3 as supplemental information, it's because we didn't
4 know how much time we would have. So, if Mr. Vargas
5 is able to get through all of the slides, she will.

6 If she is cut short, then this would have
7 still been available to the Tribunal. And that
8 particular slide is sourced in her report. She talks
9 precisely about that issue.

10 So, I'm a little bemused as to why Mr. Burn is
11 so agitated by this point. We have sat and taken in
12 good faith all of the presentations that have been
13 given--for example, Dr. Baillie today who on his cover
14 sheet, like I say, was supplementary. We have no
15 objection.

16 We want the issues to be fleshed out and, we
17 want the issues to be presented. Now, if at any point
18 Mr. Burn identifies an issue which he believes is not
19 sourced in her report or within the scope of the
20 expertise that her report illustrates, then very happy
21 to hear or to have that part struck from the record.
22 But I think the Tribunal will realize that at the end

1 of Ms. Vargas' presentation it will be squarely within
2 her expertise, which is what Costa Rica is entitled to
3 present to you.

4 The only other alternative, sir, I would say
5 is if Mr. Burn wants to make an application that
6 Ms. Vargas be asked to leave the room, he take time,
7 which I would ask be on his time, to identify the
8 slides that he has a particular objection to. And if
9 there is an agreement--if there's a decision by the
10 Tribunal that that slide be removed, we will remove
11 it.

12 We have no issue with abiding by the rules.
13 But I do not understand why this--having heard three
14 minutes of Ms. Vargas' presentation gives Mr. Burn the
15 right to conclude that she's beyond the scope of her
16 report.

17 PRESIDENT SIQUEIROS: Well, the presentation
18 of Ms. Vargas does have to be a summary of her
19 presentation because this is the objective at this
20 point. Her presentation today must relate to the
21 report that she has submitted; if there are materials,
22 demonstrative exhibits that are already on the file

1 which are referenced in the slides as to the source,
2 then we can proceed.

3 If you, Mr. Burn, or your legal team identify
4 that there is some information which is not, then
5 please raise it. But let's otherwise allow Ms. Vargas
6 to continue. But you are aware, Ms. Vargas--and I
7 will repeat this if necessary in Spanish.

8 But you are aware that this presentation is
9 and should be a summary of your written report that
10 has been submitted?

11 THE WITNESS: Sí señor.

12 PRESIDENT SIQUEIROS: Okay. Thank you.

13 MR. LEATHLEY: Ms. Vargas, I think you just
14 said--ah, yes.

15 PRESIDENT SIQUEIROS: Please go ahead.

16 THE WITNESS: Thank you.

17 As I was saying, the issue of areas where
18 there was no EV file became important for the analysis
19 because based on the executive decree that you see on
20 the screen, which is the regular
21 procedures--regulations of SETENA is the backbone for
22 all rules to conduct environmental evaluations in the

1 country or assessments, and it clearly says that the
2 environmental assessment has to be carried out prior
3 to carrying out any project and development
4 activities. And this is very clear in what you see in
5 the red circle on the screen.

6 The regulator went beyond this, and it is
7 especially relevant in the case of segregations for
8 urban use. A segregation for an urban use is quite
9 clearly miscalled "easements," and it is precisely the
10 area in the red circle on the screen.

11 Not only can you see them on that plan on the
12 screen but not prior to when construction began. This
13 is an aerial photograph showing the mis-called
14 easements. They are actually sort of roads that make
15 it possible to have lots. And you can see that a
16 number of them already have construction. Not all of
17 them, but there was some already with construction on
18 the lots.

19 This means that there is a violation of what I
20 mentioned a moment ago, that the EV must be obtained
21 prior to beginning construction. And I'm saying this
22 to emphasize the point that what has been stated or

1 suggested in other presentations and pleadings is
2 incorrect, that the easements could, in a certain
3 manner, perhaps did not require an EV. They did need
4 it because they are an urban development as mentioned
5 in the article that I just showed you of the regular
6 procedural regulation.

7 The area in pink on this screen says that the
8 EV process depends on the size of the construction and
9 some other aspects pertaining to the land. We have
10 also heard about a number of SETENA resolutions,
11 perhaps they were not stated by name, but you see them
12 highlighted in yellow on this screen.

13 And I want to refer in particular to 583-2008.
14 These are resolutions that those of us who work on EIA
15 talk of them as the exception or exemption
16 resolutions. Why exemptions?

17 Because when the SETENA established its
18 regulation, it was very, very broad. And the Organic
19 Law--Environmental Law imposes that the reason for
20 having an EIA was established in such broad terms that
21 absolutely any human activity that has an impact on
22 environment had to go through an EIA with SETENA,

1 which meant that SETENA was overcome with projects
2 that were ridiculously simple, such as the repair of
3 sidewalks, changing windows, or strengthening some
4 walls or whatever.

5 So, in quantity, there were a lot. But their
6 complexity was exaggerated. They were quite simple.
7 So, a number of resolutions were issued. And the ones
8 that I've highlighted on the previous screen, which
9 was to obtain exemptions from SETENA of activities
10 that are deemed to have very low environmental impact.

11 By "very low," SETENA made it absolutely clear
12 that they could--that one could not consider as having
13 a very low environmental impact any activity being
14 carried out in environmental fragile areas. This
15 could include wetlands, rivers, creeks, or any other
16 kind of fragile area as defined in the regulations.

17 There are many points in the resolution. But
18 the most iconic are a clear example of what we're
19 dealing with here, and they refer to individual homes.
20 In other words, if a family buys a lawn that has all
21 its services that have been provided in a development
22 that have been duly constructed, then, obviously, that

1 family did not need to conduct their EIA. The
2 neighbor likewise and another neighbor also have their
3 own EIA.

4 So, these cases are exempted. It's understood
5 that the development already has its EV. The same
6 applies to road repair work. Now, this cannot be
7 compared to what took place in Las Olas without EV in
8 the so-called or the badly called area of easements.

9 Because as we've already explained, this is an
10 urban development with 72 lots and, furthermore, has
11 impacted areas that at least could potentially have
12 wetlands. So, the exemptions definitely do not apply
13 to this case.

14 This map simply shows that the permits were
15 obtained for individual lots. They were filed with
16 municipalities. This is important to understand
17 because Resolution 583, the one I just explained to
18 you, it's not that you don't need an EV, but the EV is
19 understood as being awarded with the municipal
20 permits.

21 So, somebody could say "If I have a municipal
22 permit, I have my EV." And that's why it was so

1 important to explain that Resolution 583 under no
2 manner whatsoever can be deemed applicable to an urban
3 development of 72 lots where roads and services were
4 put in place as the case--as this case.

5 This is a resolution that is in the
6 presentation. This is an extract from Resolution 583
7 just so you better understand what kind of activities
8 the resolution refers to. They're all of very low
9 environmental impact, all of these activities.

10 On this slide, we have a description of--well,
11 this slide gives an example of the different EIAs in
12 the country.

13 First, we have the complex ones. That's for
14 highly complex projects with high environmental
15 impact. And I'm reading this slide from right to
16 left.

17 Category B are intermediately complex
18 projects. They might need an environmental management
19 plan as was done in the case of the Las Olas Project.
20 Category C is 1,000 square meters, for example. And
21 where it says "Municipal Permit," that covers the
22 cases covered by Resolution 583. There's not a

1 Category D. But if we were to have a Category D, it
2 would include these. They have very low environmental
3 impact.

4 Just to give you an example, developments of 0
5 to 10 hectares, such as the easements where we would
6 be talking about 3.6 hectares, these are Category B,
7 and they would need an Environmental Management Plan.
8 They're not a D2, which is a simpler category, and
9 even less the municipal permit category which would be
10 yet another subsequent category.

11 If we were to look at the overall Las Olas
12 Project, then they would, obviously, have to be
13 Category A, where it would need an EIA, because that
14 is the most complex instrument to assess the
15 environment. This brings me to an issue of which
16 you've heard a lot, and this is the fractioning of the
17 EV.

18 No mention was made of the 72 lots. No
19 mention was made of the other commercial lots which
20 were the ones I showed with the red circle on the
21 first screen or in the different red colors based on
22 the 72 lots.

1 And even if they had not been any commercial
2 lots or if the 72 urban lots hadn't been there, the EV
3 should have been comprehensive with--between the hotel
4 and the condominium if they were part of a single
5 project and provided--that is what is provided.

6 In that case, it should have been a complete
7 EIA as to the geographic space. And this is the point
8 that we're trying to make with this slide.

9 In addition to being geographically integral,
10 it should also have been comprehensive when looking at
11 the ecosystems that exist on the site. And I'd like
12 to spend a moment on this.

13 We're not saying that fractioning is simply to
14 split files or to split a large project into smaller
15 files. When we study ecosystems, the evaluation of
16 the whole differs from the evaluation of its parts.

17 We cannot understand the wealth of a forest if
18 we only look at its trees. And we cannot understand
19 the wealth, the value, the dynamics, or the potential
20 impact on an ecosystem if we split it--if we fraction
21 it, and if we look at it as small disconnected
22 elements where the overall value is not assessed.

1 That is why Article 94 of the Biodiversity Law
2 is not a legal formality despite the value of such
3 formalities. But after all, I'm an engineer. But
4 from a technical standpoint, it is inherent to a
5 correct Environmental Impact Assessment to conduct a
6 comprehensive integral assessment. Because otherwise
7 you're detracting technically from the tour.

8 And that is why this fractioning into
9 different files not only violates Article 94, but it
10 also violates the correct process for an environmental
11 assessment.

12 This also reminds us of the sensitive-areas
13 issue, which we have already mentioned and is
14 mentioned in a number of reports.

15 Sensitive areas that Mussio identified, to the
16 enormous surprise, quite honestly; because when I read
17 Mussio's Report, he says that they were identified
18 from the very moment he stepped on the site.

19 That really induced me to shock, because I
20 couldn't understand how a professional can say that he
21 reached the site, identified the areas, and these
22 areas--well, they're not even disclosed. They're not

1 indicated to SETENA. SETENA wasn't informed about the
2 existence of these areas.

3 Environmental practice, the way I know it, is
4 quite the contrary; one goes to the site with a
5 geologist, biologist, and the appropriate
6 professionals. We draw up a map of the information
7 generated by each one. We superimpose the site design
8 and ensure that the environmental conditions of the
9 property are respected.

10 And we then present that information to the
11 environmental secretariat, because otherwise, it's
12 impossible to have an EIA. I can't have an EIA on a
13 wetland, a forest, a river, or an ecosystem if I don't
14 characterize that ecosystem and say where it is
15 located on the property.

16 And quite clearly, what Mr. Mussio described
17 in his Report was environmental fragile. And it's not
18 my own words; it's his own words, where he said that
19 areas that could be considered fragile or vulnerable,
20 and those are the areas that I will be addressing in a
21 few moments.

22 But let me first say that environmental

1 fragile areas are not an ethereal technical concept,
2 but this is a concept that is legally specified, and
3 there are two kinds: One is already defined in the
4 regulations as expressly list, national parks,
5 protected wildlife areas--wildlife-protected areas,
6 areas with wetlands.

7 But the regulator, furthermore, has said that
8 areas that are environmental fragile have technical
9 limitations for environmental reasons, such as Mussio
10 pointed out in his Report when referring to those
11 three areas that are indicated by circles.

12 Furthermore, I was very struck by seeing that
13 the author of that Report says that environmentally
14 fragile areas are defined as such to assist the
15 Environmental Assessor to conduct the analysis so that
16 nothing is hidden that can then hinder the research,
17 but so as to, from the early stages, give some
18 guidance about what areas require special care for
19 technical environmental issues.

20 There is another area which was a fragile
21 area, Protti identified it, and we have heard whether
22 or not the Protti Report was known in good time or

1 not, but it does exist, and there is no doubt that
2 Mussio's information and Protti's information were
3 confirmed in the ex-post analysis by the Reports from
4 Dr. Baillie and by the ERM Experts that I have had the
5 opportunity to read.

6 Here, we have four maps, above Mussio and
7 Protti, the lower line, the depressions where ERM
8 found potential wetlands, and the valleys, the
9 "Bajos," where Dr. Baillie found hydric soils that
10 could be indicative of wetlands.

11 This is a superimposition of all the previous
12 data. And if we zoom in, I'd like to show you
13 Mussio's Zone 1, which you may recall is on the top
14 part of the screen. You see it on the major screen,
15 and now we zoom in.

16 And all the criteria can be found here.
17 Mussio knew early on, and said so, that there were
18 fragile conditions here. Mr. Erwin has a W5. That is
19 the wetland identified by Mr. Erwin. D3 is the
20 depression that could potentially be a wetland because
21 of its vegetation that was identified by ERM. B6 is
22 Bajo 6, as Dr. Baillie described.

1 And I don't know if you can read it clearly on
2 the screen; but if we zoom in sufficiently--and I'm
3 going to try and hold my hand steady there so that you
4 can see it on the screen; but what we're looking at
5 here is the project's development--treatment plant.
6 You have the main access to the development here, and
7 this is a waste area.

8 I cannot conceive that an EIA was conducted
9 for this. There was a submission made to SETENA, that
10 is true; but SETENA was never informed that this was
11 an environmental fragile area, where all experts
12 agreed that there are characteristics of environmental
13 fragility. That is not an acceptable environmental
14 assessment in any country, under any concept.

15 This exercise can be repeated in other areas.
16 Let me just give you two examples, because my time is
17 almost up.

18 This is a close-up of the area where Protti
19 identified the famous swampy Zone. Mussio, his
20 sensitive area 2, Dr. Baillie, Bajo 2, ERM, Depression
21 1, and Kevin Erwin, Wetland 2.

22 As you can see here, an important proportion

1 of this wetland was going to be turned into lots for
2 the easements here, or roads, and that wasn't the
3 right idea either.

4 Another part was a rain easement, when--that
5 in this kind of development is a drainage mechanism.
6 And yet another part was going to be a park, as Mussio
7 pointed out.

8 I'd like to draw your attention to the fact
9 that a wetland is not a park. A park, based on urban
10 development rules in Costa Rica, must be equipped with
11 children's games and swings and things, so that people
12 can go to enjoy the day and to walk around. But a
13 children's park cannot be a wetland. This isn't even
14 compatible, even if it's a green area, and it's not in
15 accordance with the design for this site, as provided
16 by the project.

17 And we could do the same with each of the
18 wetlands that have been identified, but I think this
19 provides a good example to show that an EIA was not
20 conducted for the ecosystems on the site, nor was
21 there a correct recognition of the ecosystem's
22 characteristics.

1 And to identify those characteristics for
2 those ecosystems was obviously the developer's
3 responsibility, and even more so, if there were
4 identified fragile environmental areas.

5 In summary, and I'll be concluding here, there
6 is absolutely no doubt for me that the request for an
7 EIA as submitted was deficient because it didn't
8 comprise the full scope of the project. Furthermore,
9 it was deficient because it did not declare sensitive
10 areas that were known or perhaps not known but they
11 were not declared.

12 Part of the project had not received an
13 Environmental Assessment, and the site design,
14 obviously, is not--does not comply with the
15 environmental characteristics of fragility, as
16 recognized on the site.

17 The country has different environmental
18 instruments: The Municipal permit that I showed you,
19 the D2, the environmental management plan for projects
20 of Type A, and they are precisely in place to guide
21 and indicate how deep are the requests for this kind
22 of project.

1 In submitting this kind of a project with its
2 appropriate complexity, a certain environmental path
3 was followed that made certain requisites that are not
4 demanded for in the most serious level would have been
5 required, and that way the site design would have had
6 to have been better adjusted to the specificities of
7 the land.

8 PRESIDENT SIQUEIROS: Very well. Thank you
9 very much.

10 Mr. Burn?

11 MR. BURN: Thank you, sir. Just to say as a
12 note, we maintain that the presentation has indeed
13 gone specifically beyond the scope of the Report. We
14 propose, rather than waste time now dealing with that,
15 we will explain that in correspondence to the
16 Tribunal, and we can deal with it after the Hearing.

17 CROSS-EXAMINATION

18 BY MR. BURN:

19 Q. Ms. Vargas, your Report was appended to Mr.
20 Erwin's Second Report; that's correct?

21 A. Yes, sir.

22 Q. There's no statement here, is there, of

1 any--of the scope of your instructions, is there?

2 A. Yes, sir.

3 Q. Did you receive your instructions from Mr.
4 Erwin, from counsel for the Respondent, from COMEX?
5 From whom did you receive your instructions in
6 relation to this matter?

7 A. From Mr. Erwin.

8 Q. You haven't recorded those instructions in
9 order that we or the Tribunal can assess your opinions
10 against those instructions, have you?

11 A. They are in the presentation. In the written
12 Report, no.

13 Q. They're not set out in the presentation;
14 they're not set out in your Report. We do not know
15 the basis of which you've expressed your opinion, do
16 we?

17 A. Is that a question?

18 Q. Indeed, it is.

19 A. Well, you've just heard me say what it is.

20 Q. Can you point to a slide or to a page in your
21 Report where you set out your instructions?

22 PRESIDENT SIQUEIROS: I think the more direct

1 question is: From whom did you receive the
2 instructions, and are those instructions reflected in
3 your Report?

4 THE WITNESS: The instructions, I received
5 them from Mr. Erwin, and the summary of the scope is
6 Slide 1, I think, after the cover of the presentation.
7 And, of course, it's very summarized, because it is a
8 presentation here.

9 BY MR. BURN:

10 Q. So, this slide that I'm showing you is
11 your--these set out your instructions; is that right?
12 Is that your evidence?

13 A. I submit this as a summary of the scope that
14 was requested from me.

15 Q. Okay.

16 MR. BURN: Well, for the Tribunal's benefit,
17 we do not accept that those are adequate or even
18 remotely adequate instructions in order to understand
19 the scope of Ms. Vargas's testimony.

20 BY MR. BURN:

21 Q. Ms. Vargas, could you go to Paragraph 52 of
22 your Report.

1 I'll read the text. It's just two sentences.
2 You say: "As part of the D1 submission, the Claimants
3 submitted a geotechnical engineering Report prepared
4 by Techno Control S.A., the Techno Control Report,"
5 and you then Footnote 45."

6 You continue on Page 14 of the same Report:
7 "There's evidence of bodies of water which are
8 protected under Costa Rican law."

9 Now, looking down at Footnote 45, you'll agree
10 with me, won't you, that it refers to R-13 and then
11 has the text, "Complete D1 Form for Condominium Sites,
12 November the 8th, 2007."

13 Do you agree with that?

14 A. Yes, sir.

15 Q. In the file in front of you, can you go behind
16 Tab 2.

17 You will see a copy of Exhibit R-13. Within
18 that exhibit, I'd like you to go to the Techno Control
19 Report to which you refer. Now, if you look in the
20 top right-hand corner, you'll see it's not very clear,
21 but there are stamped page numbers. I'd like you to
22 find--probably about 20 pages in, the page numbered

1 000187.

2 So, if you see at the top right-hand corner of
3 each page--look at the pages. There are some not very
4 clear numbers. If you could just find the Page
5 000187.

6 ARBITRATOR BAKER: And mine, at least, is
7 numbered back to front, so, 187 is the beginning of
8 the Report.

9 MR. BURN: Right.

10 BY MR. BURN:

11 Q. Do you have it?

12 A. Yes, sir.

13 Q. Very simple question: Could you just read the
14 addressee--I'm sorry, the--yes, the addressee of this
15 Report, starting with the word "Señor" near the top.

16 A. Mauricio Mussio.

17 Q. Thank you. And below that?

18 A. "Project in Playa Chaman in Puntarenas."

19 Q. So, this document is not about the Las Olas
20 Project, is it?

21 A. I think it does refer to it even though the
22 geographic reference is wrong.

1 Q. I put it to you that this is not a document
2 that relates to the Las Olas Project.

3 You didn't contact SETENA to discuss the
4 Environmental Viability permits that they issued in
5 respect to the project, did you?

6 A. Correct.

7 Q. So, you do are not aware, are you, that in
8 2004, SETENA issued an EV covering the entire
9 project--the Condominium and the Easement Section.
10 You're not aware of that, are you?

11 A. That's not the whole project. The whole
12 project, even if that were the case, includes
13 commercial lots that are not described in the scope
14 you mentioned --

15 Q. Apologies for interrupting, but you're wasting
16 time by not answering the question. You are not
17 aware, are you, that in 2004, SETENA issued an EV
18 covering the Condominium and Easement Section, are
19 you? Yes or no?

20 A. Yes.

21 Q. Thank you.

22 And SETENA--nobody from SETENA is before us in

1 these proceedings, are they?

2 A. Correct.

3 MR. BURN: I have no further questions, sir.

4 PRESIDENT SIQUEIROS: Okay. Thank you.

5 MR. LEATHLEY: Nothing from us, sir.

6 PRESIDENT SIQUEIROS: Dr. Nikken?

7 QUESTIONS FROM THE TRIBUNAL

8 ARBITRATOR BAKER: I have one very brief
9 question, if you can help me with this.

10 At what point does the SETENA judge what is a
11 complete project?

12 I give you the following hypothetical example:
13 A piece of land is owned. It's a large piece of land.
14 The person who owns it does not have the money to
15 develop the entire thing, so, they want to develop a
16 portion of the piece of land.

17 Now, in the future, 15 years from now, they
18 hope they'll have a huge master-planned development.
19 But they don't have the resources to do that now.

20 What do they have to submit to SETENA, under
21 what you've been telling us, for approval of an EV?
22 Is it what they can afford to do now or what they hope

1 to do but may never be able to afford in the future?

2 Help me understand that line.

3 THE WITNESS: Well, it depends. It depends on
4 the position of the developer at that point.

5 If the developer has the ability with--let's
6 speak specifically of Las Olas. If Mr. Aven had had
7 access only to the easements first, which he states
8 was his first stage at some point--I heard that in his
9 statement, I think. And if he had submitted an EV for
10 that first stage, and years later, he can buy the
11 property for the condominium, which I understand was
12 the second stage, well, then, the procedure is that
13 you do a D1 for the first stage and then another D1
14 for the second stage. And afterwards, you bring
15 together both files.

16 That is a possible mechanism, and the same
17 goes for the third and fourth stages as they come up,
18 if they come up.

19 Now, a different case is when I look at the
20 case--I don't remember if it was EDSA or who was the
21 consultant who prepared the site master plan for Mr.
22 Aven from Day 1 or from Day Zero, where the whole

1 development that he wanted to create was already
2 conceptualized.

3 So, in that case, the obligation is to do the
4 whole assessment of the whole master plan that he
5 plans to build.

6 Now, you have--that is, you have both
7 possibilities. In the first case, you have the first
8 and second and third and fourth EVs that are carried
9 out in a cumulative fashion, integrated each time in
10 independent files because that is what SETENA demands
11 because they can come together afterwards; and then in
12 the second case, a Comprehensive Report is submitted
13 for everything from the beginning.

14 ARBITRATOR BAKER: Exactly, and that's the
15 line I'm trying to help you help me understand.
16 Because the only thing that I heard that was different
17 from the two examples that you used was that in the
18 master-plan community, he owned all four parcels from
19 the beginning.

20 But that doesn't answer my hypothetical about
21 the resources being available to do that. So, in
22 other words, I may conceive that I'm going to build,

1 you know, a new capital city for the United States,
2 for those of us that are unhappy with the current
3 election. But it may take me a while to do that.

4 So, at what point would I have to talk to
5 SETENA? Would I have to talk to them when I conceived
6 the master plan or when I had the resources to build
7 the master plan?

8 THE WITNESS: When you conceive it. As a
9 matter of fact, we have projects that develop in a
10 20-year period or even longer, and EV is done of the
11 master plan, and then you do it in stages.

12 The developer himself doesn't have to be the
13 owner of the lots to be able to do the Environmental
14 Assessment--not the EV, the Environmental Assessment.

15 And from that point of view, there is
16 flexibility, and no type of warranty or collateral has
17 to be given from the beginning necessarily.

18 Everything can be submitted in stages.

19 The only important thing is that the
20 Environmental Assessment be done comprehensively.

21 ARBITRATOR BAKER: So just to press you on
22 this point a bit further, let's assume that I decided

1 I had wanted to retire to Costa Rica, and I decided
2 that I would cash in one of my pension funds, and I
3 had bought all of this property for myself. And I
4 decided I was going to put only one house on it.

5 And I do that. So, I go through, and I do
6 whatever I need to do under the D2 analysis, because I
7 now own all this property, and I build myself a
8 beautiful house in a resort on all these hectares.

9 I die in a surfing accident, and, you know,
10 five minutes later, my children decide that this is a
11 perfect spot for a master-planned community.

12 So, is everything that I have done out the
13 window? Is it when they conceive that they want to do
14 this? Is it when they--when they contract with an
15 architect to design a master-planned community? Is it
16 when you have the investor pool?

17 In other--I'm trying to help draw the line,
18 because it's very easy with the standpoint of
19 hindsight to say, gosh, if you're going to do
20 everything at once and you have all the resources to
21 do that, that maybe you should do it this way.

22 But this decision is often made prospectively,

1 not retrospectively. So, how does SETENA answer that,
2 and what regulations would you point me to to answer
3 that.

4 THE WITNESS: The answer is not necessarily
5 specific. What SETENA requires is that before
6 building, period--in other words, before building each
7 stage, before building all of it, if you have the
8 funds for all of it, or before each stage, if you have
9 funds only for each stage--but once again, you don't
10 need to have the funds to develop a stage--in order to
11 be able to assess it. To assess it is much cheaper
12 than to develop it.

13 So, in this case, there were studies that
14 covered the whole property. It just simply wasn't
15 stated that there was going to be a prior stage in the
16 easement area.

17 ARBITRATOR BAKER: So, what I take from that
18 is that there really is not a hard rule; it's more a
19 judgment call about what you ultimately intend to do
20 about the property, and you're saying SETENA wants to
21 know what you're ultimately going to do. And then you
22 will decide whether it's a D1 or a more

1 restrictive--is that correct?

2 THE WITNESS: To the best of your knowledge in
3 that moment--is that--that sentence in English clearly
4 explains the meaning in Spanish.

5 If you didn't know that there were going to be
6 later phases, then there's nothing wrong in not
7 assessing them at the outset. But if it was known,
8 then, quite obviously, there is noncompliance with the
9 rule when the later stages are not declared.

10 ARBITRATOR BAKER: Thank you. That's very
11 helpful.

12 Mr. Chairman?

13 ARBITRATOR NIKKEN: I don't understand how
14 this contingent system, whether one knew or didn't
15 know, whether it is better or worse protection for the
16 environment. If there's no difference, then why do
17 you establish--why do you set it out as a difference?

18 THE WITNESS: Well, thank you for that
19 question.

20 Let me be clear: On the assumption you didn't
21 know the evaluation assessment is for the initial
22 phase of which you know is going to happen, and when

1 an additional phase is added to your project, the
2 obligation is to see the cumulative impact of the
3 development in order to be able to always imbue it
4 with this sense of integrality. That is why I said
5 it's possible to unify or to link files afterwards;
6 otherwise, the environmental aspect of the project,
7 the old part and the new part, will not be viewed as a
8 whole.

9 So, it is correct to declare, but then the
10 second phase could then be presented as showing that
11 it is linked to the first one, and that way you
12 established all the interrelationship, the links
13 between the two.

14 ARBITRATOR NIKKEN: Thank you.

15 PRESIDENT SIQUEIROS: I have a question. The
16 Claimants' counsel asked you to look at the Report
17 that appears from Page 000187, and I'm referring here
18 to Tab 2.

19 This is an Annex of Exhibit R-13. And this is
20 the reference showing that this Report is addressed to
21 Architect Mauricio Mussio, but it refers to a
22 different project, not the Las Olas one.

1 Have you got it before you? Could you tell me
2 what the relevance of this is? Help me understand why
3 Architect Mussio attached to his D1 request to SETENA
4 for the Las Olas Condominium project, why did he
5 attach the Report from another project?

6 THE WITNESS: Well, quite honestly, my
7 impression is that this Report does actually
8 correspond to Las Olas, and the geotechnical study,
9 because this is a geotechnical, one talks about the
10 soils and the sedimentation of the construction, it's
11 one of the seven or eight basic studies that is
12 required by regulation, and they are to be attached to
13 D1, as well as a biology, geology, hydrogeology,
14 archeology, all of those reports.

15 It's a long list of studies that are to be
16 annexed. And the soils, geotechnical, is one of them.

17 PRESIDENT SIQUEIROS: But how did you come to
18 that conclusion that this one actually does correspond
19 to the project? What is it that induces you to
20 believe that it is, in fact, this project that it
21 refers to?

22 I'm looking at some pages further into the

1 document; for instance, Page 174--000174, and even the
2 plan for the site looks different.

3 THE WITNESS: Well, more or less. It's a
4 terrible map, I won't argue that. It's quite
5 shameful. It's a very poor--very bad map. But if you
6 look at the upper portion, you can see a wide street
7 that seems to say "Carretera Costanera" which is the
8 name of the main road between Jaco and Quepos, and it
9 is the road that is adjacent to the northern part of
10 the Las Olas sector.

11 And in the southwest, there is another smaller
12 road with some limited access, and it looks very
13 similar to what we have seen in the context of Las
14 Olas.

15 I get the impression that it is this project.
16 However, none of the conclusions that I've pointed out
17 changes in any way based on this Report.

18 PRESIDENT SIQUEIROS: But it's simply that;
19 it's your impression that it refers to this project.
20 There's nothing in this document--

21 THE WITNESS: Well, I cannot prove that it was
22 conducted on the site. There is no clarification by

1 the Las Olas developers that this is a mistake either;
2 so, I assume, if they didn't correct it, then this is
3 the right document in the file, and I find that it is
4 consistent with what we see on the site, although
5 we're not going to query the poor quality of the map.

6 PRESIDENT SIQUEIROS: Perhaps I should ask
7 first Mr. Leathley, because this is his exhibit, R-13.

8 Do you have an answer to this question,
9 why--do we know or--why we have reason to doubt that
10 this might be the Las Olas Project?

11 MR. LEATHLEY: Sir, I'm afraid you're testing
12 my technological know-how. If it's--I know it's
13 unsatisfactory now, but can I take instructions and we
14 can respond in due course or in post-hearing briefs?

15 PRESIDENT SIQUEIROS: Mr. Burn? This would
16 have been part of Claimants' filing made by his
17 advisor, or Claimants' advisors.

18 MR. BURN: Yes. It's our understanding that
19 this document does not relate to Las Olas; it relates
20 to another project on which Madrigal Mussio were
21 working. We don't know why it's been produced in this
22 Arbitration. All we can say is it has no relationship

1 with this project. Hence the questions that were put.

2 We're perfectly happy for this to be addressed
3 after this Hearing. It may be something where it's
4 necessary to go back to Mr. Mussio, frankly.

5 PRESIDENT SIQUEIROS: Okay. Thank you very
6 much.

7 Any follow-up questions in respect to the
8 questions? No?

9 Thank you very much, Ms. Vargas, and good
10 afternoon.

11 Would you like a five-minute break to prepare
12 the next expert witness? Okay. That'll be a
13 ten-minute break.

14 (Brief Recess.)

15 PRESIDENT SIQUEIROS: Are we ready to proceed?
16 Okay.

17 Mr. Erwin, good afternoon.

18 THE WITNESS: Good afternoon.

19 KEVIN ERWIN, RESPONDENT'S WITNESS, CALLED

20 PRESIDENT SIQUEIROS: I will simply give you a
21 few directions, which we need to do before we proceed.
22 And this relates to the manner in which your

1 examination will be conducted.

2 As you are aware, after you make your
3 presentation--well, before that, counsel to the
4 Respondent will make a brief introduction. We'll ask
5 you to confirm your Statement. You will proceed,
6 then, with your Presentation. And this will be
7 followed, then, by cross-examination on the part of
8 Claimants' counsel.

9 Any questions they present to you, we ask you
10 to make sure this is well understood. If you need any
11 clarification, please ask for that, and then respond
12 to the question. If you wish to make any clarifying
13 comments, you may do that subsequently.

14 If you wish to make any comment at that moment
15 and there are questions in the cross-examination that
16 counsel needs to address, please first address
17 counsel's questions; and then after the line of
18 questioning, you may make that clarification, or
19 counsel at the time of redirect, counsel to the
20 Republic of Costa Rica, may allow you to do that
21 clarification.

22 And before we proceed, I would ask you to read

1 the statement that is right there in front of you with
2 respect to your Statement.

3 THE WITNESS: I solemnly declare, upon my
4 honor and conscience, that my statement will be in
5 accordance with my sincere belief.

6 PRESIDENT SIQUEIROS: Thank you very much, Mr.
7 Erwin.

8 MR. LEATHLEY: Thank you, Mr. President.

9 DIRECT EXAMINATION

10 BY MR. LEATHLEY:

11 Q. Good afternoon, Mr. Erwin.

12 I just, a formality first to just check your
13 Reports which are in the big binders there on your
14 desk. Could I just ask you to have a look at the
15 binder marked "Volume I;" and you don't have to turn
16 all the pages, but if you can just satisfy yourself
17 that those are your Reports, your two Reports, please.

18 I think everything will just be in your first
19 binder.

20 A. Yes.

21 Q. Great. Thank you.

22 And do you have any corrections you'd like to

1 make at all to either of the two Reports, sir?

2 A. Only one significant one, and that's an
3 omission in the discussion of the classification
4 system for wetland types under the Ramsar Convention.

5 There was one classification that was omitted.
6 Three were stated. There's actually four, and that
7 would be the potential for capital X, small f
8 classification, which is freshwater, tree-dominated
9 wetlands.

10 Q. And do you have the specific place? I have a
11 note that's been passed to me. It could be Paragraph
12 21. Could I ask you to check? Because, obviously,
13 we'd like the Tribunal to make the specific
14 correction.

15 I'm sorry. I meant to say 31 of your Second
16 Report.

17 A. I'm looking at the version in Spanish, and
18 that appears to be correct, 31. Paragraph 31.

19 Q. Thank you, sir.

20 And I understand you're going to be giving a
21 brief presentation this afternoon, and again, with the
22 permission of the Tribunal, I'll indicate when you get

1 to about the 20-minute mark, just, again, to try and
2 keep us all on track.

3 But other than that, sir, please go ahead with
4 your presentation.

5 DIRECT PRESENTATION

6 THE WITNESS: Okay. Could I have the first
7 slide, please?

8 Good afternoon, gentlemen. My name is Kevin
9 Erwin. I'm an ecosystem ecologist, and I come to you
10 here today with about 45 years of experience in
11 wetlands. I know I don't look that old, but it's been
12 a long time.

13 I have been president of my own consulting
14 company since 1980. Prior to that, I worked for a
15 number of state and federal agencies, including the
16 National Marine Fisheries Service, the National
17 Science Foundation, and two natural resource and
18 environmental regulatory agencies in the state of
19 Florida.

20 I am a Senior Certified Ecologist with the
21 Ecological Society of America and have been so for
22 approximately 30 years. I'm also a--I have a

1 certification from the Society of Wetlands Scientist
2 as a Professional Wetland Scientist. As I said, a lot
3 of experience. It breaks down to about 50/50 between
4 the private sector and the public sector.

5 My specialty is working on large-scale
6 ecological evaluations and restoration projects,
7 biodiversity, conservation, development planning, for
8 instance, for developers in the private sector, and
9 watershed evaluation and management studies.

10 I have a position with the Florida Gulf Coast
11 University. In the past, I held a position with the
12 Ecological Society of America on their Board of
13 Professional Certification and Ethics.

14 And recently--I've worked with Ramsar,
15 actually, for more than three decades and just
16 recently retired from an official position with them
17 as a member of the Scientific and Technical Review
18 Panel, of which I was nominated to by the U.S. Fish
19 and Wildlife Service and confirmed by the Secretariat
20 of the Ramsar Convention.

21 Other positions I have noted before you, and I
22 won't go through those today, but it involves a wide

1 range of local, state, and federal agencies,
2 appointments to and work with a variety of U.N.
3 agencies, such as IUCN and UNEP.

4 I've published numerous refereed articles on
5 ecological restoration, wetlands, even land planning,
6 water resources, and most recently, the effects of
7 climate change on wetlands.

8 I developed a temperate wetland restoration
9 program for the Canadian government and spent 15 years
10 working with the Canadians to do that in the province
11 of Ontario.

12 I've worked on a variety of pretty well-known
13 projects, at least in Florida, such as Florida Gulf
14 Coast University, which we designed and permitted; the
15 Viera, which is a new town, or a new city; the
16 Gulfstream Natural Gas Pipeline, which goes across the
17 Gulf of Mexico from Alabama to central Florida and
18 across central Florida to the east coast of Florida.

19 And I've conducted a wide variety of research
20 on these topics for a number of agencies, such as the
21 U.S. Environmental Protection Agency and NGOs and
22 local and state governments.

1 Let me summarize my conclusions, and then I
2 will spend the remainder of my presentation going
3 through what we did in order to reach those
4 conclusions.

5 First, wetlands do exist on the Las Olas
6 property. We found seven wetlands which were mapped
7 on site, and one which we believed to be off-site, but
8 it turns out to be, it's on-site.

9 And also studied what you've heard all about,
10 Wetland Number 1, and found that that is an impacted
11 wetland that has been drained and filled and does
12 contain hydric soils.

13 We also found that forests do exist on the Las
14 Olas site and have existed during that time frame that
15 we've discussed during these proceedings.

16 And finally, wildlife resources exist on the
17 site, both those that are dependent on wetlands and
18 those that are forest-dependent species.

19 I want to take a few minutes just to talk
20 about, you know, Ramsar, because, you know, Ramsar
21 has--provides great guidance to 169 Member Countries
22 around the world that subscribe to the Ramsar

1 Convention on Wetlands, of which Costa Rica is one.
2 They joined in 1992.

3 And over the years, the--the Convention, which
4 started in 1971, but since that time, by the '90s, it
5 was broadening its scope of implementation to cover
6 all the aspects of wetland conservation and wise use,
7 recognizing wetlands as ecosystems that are really
8 vital for biodiversity conservation, and really, for
9 the well-being of humans on this planet.

10 So, what are wetlands, according to Ramsar?
11 So, I put before you the exact definition that comes
12 from the Convention, which is that wetlands are areas
13 where water--water is the primary factor controlling
14 the environment and the associated plant and animal
15 life. They occur where the water table is at or near
16 the surface of the land or where the land is covered
17 by shallow water.

18 These are--Ramsar Convention takes a broad
19 approach to determining just what are wetlands, which
20 comes under its mandate, and they describe them this
21 way: "Areas of marsh, fen, peatland, whether natural
22 or artificial, permanent or temporary, with water

1 that's static or flowing, fresh or brackish, including
2 areas of marine water, the depth of which does not
3 exceed 6 meters."

4 So, that pretty much covers all of the wet
5 things on our planet.

6 So, Ramsar's definition then further scopes
7 down from that 30,000-foot view a little closer and
8 divides wetland systems up into five major wetland
9 types. And for the purpose of our discussion today,
10 we're really talking about the last one before you,
11 which is palustrine, which means marshy swamps and
12 bogs.

13 The next level of describing wetlands in the
14 Ramsar Convention is the classification system.
15 Everybody has a classification system. And like
16 soils, wetlands are not to be left out. And Ramsar
17 actually has 42 wetland types identified by the
18 Convention, and they're grouped into some major
19 categories, like coastal and marine and inland and
20 human-made; but beyond that, now they scope down to
21 classifications within that system.

22 So, those 42 classifications, all right,

1 include basically four types that we find in the Las
2 Olas system, and I've listed them here.

3 And they include seasonal, intermittent,
4 irregular rivers, streams, creeks. Those were found
5 at Las Olas by our team.

6 The next one is permanent freshwater marshes
7 and estuaries and pools. Those would be areas with
8 longer hydro periods.

9 The next one would be seasonal, intermittent
10 freshwater marshes, "intermittent" meaning they're not
11 always flooded, they're not always dry.

12 And finally, freshwater tree-dominated
13 wetlands.

14 So, what's the relevance of Ramsar in these
15 definitions and classifications to Costa Rica and
16 Costa Rica's definition of wetlands?

17 Well, the Republic of Costa Rica really--their
18 definition of wetlands strictly adheres to the Ramsar
19 definition. The language, if you hold them up side by
20 side, is nearly identical.

21 So, earlier this year, I was contacted by the
22 Republic of Costa Rica on this matter. And they

1 briefly described to me what the issue was, that there
2 was this piece of property, which I had never seen
3 before; and the issue was, are there wetlands, are
4 there no wetlands on this site? Just what's on the
5 property?

6 And I approached the Republic of Costa Rica
7 and their inquiry with me like I do any other client
8 that comes to me. And I told them, you know,
9 that--for--as soon as I told them I didn't think I had
10 any conflicts of interest, I prepared them for the
11 fact that we would do a thorough evaluation, but I
12 couldn't tell them, I couldn't promise them, that we
13 would find wetlands or we would not find wetlands on
14 the property. And if we were to do this work, we
15 would let the chips fall where they may, so to speak.

16 And that was the terms of my engagement,
17 basically. They agreed to do that.

18 So, within days--and I mean days--after that,
19 that conversation, I took a small team to the project
20 site with a little bit of information, including an
21 aerial photograph, a couple of aerial photographs, and
22 really not much else because of the timing.

1 So, we proceeded to conduct our evaluation of
2 the Las Olas property just as I do any piece of
3 property, especially a property of significant size
4 like this. And it doesn't matter whether it's in
5 litigation or not. It could be for a developer who's
6 doing some conceptual planning to, you know, decide
7 how they're going to develop the property.

8 So, our first goal is to have a general
9 understanding of the landscape, you know, where it is,
10 what it is, what's the morphology of that landscape,
11 and then start looking at what's within that
12 landscape.

13 So, as you see on the slide that I'm showing
14 you right now, what I'm doing is showing you the
15 property, and we began not by directly entering the
16 property. The first thing I did was I walked the
17 perimeter of the property, actually walked the roads
18 that surrounded the property, just to see if there
19 were any outfalls. If there's water on the property,
20 it's going to be--at some time, given the nature of
21 this landscape, it's going to be flowing off the site.
22 There will be discharge points.

1 We located those culverts and those discharge
2 points, and, you know, after that, our team, which was
3 actually comprised of another certified ecologist from
4 my firm, some biologists and botanists from Siel Siel,
5 we proceeded to then enter each of those outlets. We
6 didn't know that there was a wetland inside of them at
7 that point. But we entered those outlets and began
8 to--the best word to describe it would be to survey,
9 in a broad sense, what was there.

10 Not to delineate the boundaries of a wetland,
11 because you get into trouble if you get into the weeds
12 too quick. So, we're still looking generally at the
13 landscape, and we begin to identify wetlands that are
14 associated with each of those--each of those outfalls.

15 So, as we--as we walk through those areas,
16 we're basically zigzagging through them to be able to
17 determine, is--are we looking at something that could
18 a wetland; and if we are, what are the general
19 boundaries? You know, what are the areas like that
20 are within this wetland, and what are the areas like
21 that might be outside the boundary?

22 And what we found was we found eight separate,

1 distinct wetland habitats within the Las Olas system.
2 And we used--we had GPS with us. We were not walking
3 and GPSing the boundaries at that time because
4 we--what we were doing was we were conducting a
5 survey, really, to find out, Number 1, if there were
6 wetlands on the site.

7 So, we spent a good bit of the first two days
8 just examining the whole site to determine if there
9 are wetlands there; and if they are, what are their
10 general locations, what is the water doing on the
11 site, is it feeding into the Aserradero River complex
12 to the east or is it going somewhere else?

13 And we were able to determine the location of
14 those eight wetlands, generally where the water was
15 discharging off-site, that some of those wetlands were
16 actually part of a freshwater tributary system,
17 headwaters, if you would, of the Aserradero River and
18 Estuary that's located to the north and to the east of
19 the project site.

20 We concluded our two-day visit at that point
21 by look at Wetland Number 1. Wetland Number 1 is
22 different than Wetlands 2 through 8, and I'll get into

1 that a little bit more in this presentation. But
2 given the fact that Wetland Number 1--as you know by
3 now, we've discussed that it's been disturbed. It's
4 been drained and it's been filled.

5 So, the manner in which we conduct that
6 evaluation is a little different. It's almost like
7 doing a post mortem, if you will, because some of the
8 features that you would have seen if it was still in
9 its natural condition may have disappeared completely
10 or they may have been modified because of some natural
11 or human-induced modification.

12 So, we looked around within a boundary that we
13 had--that we described on-site of--before disturbance,
14 where the wetland boundaries might have been,
15 approximately, and at that point determined the
16 general location of where the drainage--the ditches,
17 if you will, were constructed within Wetland Number 1
18 and where the fill material was placed. And there was
19 no doubt in my mind that we were talking about fill
20 material that had been placed by equipment. And I'll
21 show you why in a little bit.

22 Before I leave this slide, you'll notice some

1 points and some arrows. This work that we did was in
2 March, and it was the height of the dry season, very
3 dry, no rain, very--very hot. There was--there was no
4 standing water, to any significant extent, within the
5 subject area of Las Olas.

6 But what we were looking at was a lot of
7 wetland indicators. You don't have to have--somebody
8 like me doesn't need to have water to determine
9 whether there's a wetland there and what the water
10 depth might be, because we have all kinds of
11 biological and physical indicators that are on the
12 site in between the periods of--of inundation, you
13 see.

14 So, we left the site in March with a lot more
15 knowledge than we had before we got there. But we
16 knew we were not going to be able to return until
17 later on in the--in the summer.

18 And so, what I did was I engaged Siel Siel to
19 do some hydrological monitoring along the boundaries
20 of the site. We didn't have permission to access the
21 interior of the property. But what I did was I set up
22 a hydrological monitoring program so that we could

1 see, is there going to be water on the site, and if
2 so, what's the duration of--of inundation and
3 saturation on the property in each of those--each of
4 those wetlands.

5 We also set out to develop a methodology for
6 further examining Wetland Number 1 to see if it was,
7 in fact, a wetland before it had been disturbed.

8 This is the conclusive evidence that those
9 Areas 2 through 8, all right, are wetlands. If you
10 don't have water, you don't have a wetland. It's as
11 simple as that, and the Ramsar definition reflects
12 that.

13 And the fact that the regulatory system in the
14 United States, which is probably the most significant,
15 intense, well-tested-in-the-courts system that we have
16 on earth. And if you don't have water in these
17 depressional areas or in streams or whatever, you're
18 not going to generate hydric soil conditions. And if
19 you don't have hydric soil conditions, it means you're
20 less likely to have wetland plants.

21 So that's the hierarchy of interest here. So,
22 this was really important to us, was to be able to

1 find out what the water was doing on the site.

2 So, this is the data that shows, for the
3 period from early June through the middle of August,
4 that the site--those areas were, in fact, inundated.

5 And I returned to the site in late August.
6 So, I could actually add to that hydrograph if I
7 wished, because each of those wetlands was
8 well-inundated at the time of my inspection at the end
9 of August.

10 Yes, sir.

11 PRESIDENT SIQUEIROS: Just a question. You
12 mentioned that you were not able to enter into the
13 property to make your determination within the
14 property?

15 THE WITNESS: Well, it has to be--it has to be
16 arranged through--through you. So, as is typical in
17 cases--I'm not used to Arbitration as much as I am
18 civil and administration litigation, so--

19 MR. BURN: Just to be clear, sir, we consented
20 on every occasion we were asked to make the site
21 available.

22 MR. LEATHLEY: Yes. This isn't a point of

1 contention, Mr. Burn. We asked on the two occasions
2 for the visits; they were granted. And so, I think
3 Mr. Erwin is referring to surveys in the interim
4 periods, working with Siel Siel.

5 PRESIDENT SIQUEIROS: Okay.

6 MR. LEATHLEY: Can I take this opportunity to
7 give Mr. Erwin the 20-minute warning?

8 THE WITNESS: Oh, jeez; I'm not halfway done
9 yet.

10 Okay. So, we come back to the site in the wet
11 season at the end of August. Every one of the
12 wetlands, including Number 1, has got standing water
13 in it. So, what you see before you now is a result of
14 me going back with an even, you know, larger team of
15 botanists, local Costa Rican botanists, experts in
16 their field, and also biologists, to look at the
17 wildlife on the site.

18 And the biologists went and did their own
19 thing on wildlife, and they were there at different
20 times. But the botanists were together with myself,
21 another ecologist from my office, and we literally
22 mapped, delineated, the edge of the wetland by looking

1 at the morphology of the landscape, the depression, if
2 you will; looking at the vegetation; and looking at
3 any other characteristics that would give us an
4 indication of where the boundary of that wetland would
5 be.

6 There's a very thorough plant list. I will
7 tell you right now that for identifying a wetland, the
8 most important thing is the water, and when you look
9 at the vegetation, despite what you heard a few hours
10 ago, it would be just--you'd be remiss. It would be
11 problematic. It would be problematic to only list
12 plants that are wetland. And--many plants are
13 just--some plants are just found in wetlands. And
14 those are obligate.

15 Many plants are found in both wetlands and
16 uplands. We call those facultative. So a facultative
17 wetland plant by definition in the 1987 U.S. Army
18 Corp. of Engineers Manual, which I would hold out to
19 you is well-founded by science, and also, you know,
20 trusted in administrative proceedings, will tell you
21 that those plants go both ways, so to speak, and about
22 two-thirds of the time, a fat, wet plant is going to

1 be found in wetlands, but about a third of the time,
2 you can find it in uplands. The fact that you can
3 find them in both places doesn't mean that you should
4 throw them out and ignore them. I've never heard of
5 anybody suggesting that.

6 So, what you see here before you now is the
7 result of those rather intense surveys with a
8 GPS--actually, two GPSs for redundancy, in which we
9 delineated the boundaries of the wetlands.

10 So, we've gone from an approximate boundary
11 that I showed you previously as a result of our work
12 in March to now a well-field-tested boundary. And as
13 you can see, we narrowed them down.

14 This is a conservative approach to doing the
15 delineation. Had the vegetation not been--a lot of it
16 cut down and chopped up, identifying plants would have
17 been easier. We would have found more. But for a
18 variety of reasons, there was cutting of trees,
19 cutting of mid-story smaller trees, and ground cover
20 being chopped up.

21 So, let's take a brief look at these wetlands.
22 All right. And I'm just going to go through these

1 rather briefly, Wetland Number 1 and Number 2 here.
2 And it'll give you a chance just to get a flavor for,
3 you know, what these looked like, the degree of
4 inundation, as every one of these photographs was
5 taken in late August of this year. So, I'm just going
6 to go through these rather quickly.

7 So, now we've got Wetlands 2 through 8 with a
8 good delineation. We are still left with an
9 approximate boundary on Wetland Number 1. So, what we
10 do know is that these areas are connected to the--many
11 of them are connected to the Aserradero system,
12 especially those wetlands that are on discharge to the
13 north across the Pacific Coast Highway and to the
14 east, across a local road into tributaries of the
15 Aserradero.

16 So, what I've done here is I'm using an aerial
17 photograph. And this particular aerial photograph is
18 dated 2009. It was taken in March of 2009, to show
19 you within that yellow box is the area of Wetland
20 Number 1.

21 And what's clear to me is there is disturbance
22 in that area of Wetland Number 1, and we confirmed the

1 disturbance on site by myself and others walking the
2 boundary of where the fill material had been placed.

3 That light area that you see within that
4 yellow box is reflectance of the fill material that's
5 been placed in the wetland.

6 And walking on the ground, it becomes very
7 obvious that this is actually fill material, because
8 the transition between the fill and the more natural
9 grade is rather abrupt. And when you dig soil pits,
10 we found fill material and not native soil.

11 And so, what we did at that time was we had
12 some drillers come out and take some cores within
13 Wetland Number 1.

14 And here, you see the methodology that I
15 applied to looking at the soils within Wetland
16 Number 1. And it pretty broadly covers the area that
17 we guesstimate would be within the historic boundary
18 of Wetland Number 1.

19 We did this for two reasons: Number 1, to
20 ascertain the depth of the fill material and confirm
21 that it is actually fill material; and Number 2,
22 what's under it? You know. If we have hydric soil,

1 that's where we're going to find it. We're not going
2 to find it in the fill material.

3 So, I had no idea what we were going to find,
4 because I did not know what the people that were doing
5 the filling and the development of the site--I didn't
6 know--I had no understanding of how that preparation
7 work was being done.

8 As you know, sometimes, you know, doing site
9 work, they'll just put the fill right on the--on the
10 ground. But many times, especially in wetlands,
11 they'll remove the wetlands soil because of the spongy
12 nature of the soil--we call it "demucking." They'll
13 remove that and then replace it with fill material.

14 And in this case, we had no idea.

15 So we took the cores, and what we did find was
16 depths of fill material that ranged from just under 1
17 meter to just over 2 meters in depth. And then below
18 that, the cores reflected hydric soil conditions.

19 I am not a soil scientist, but I am a
20 well-experienced wetland ecologist. So, I get a
21 chance to dig holes periodically. But we typically
22 don't do significant soils analysis, especially in

1 cases where we have the wetland hydrology
2 well-established. If it's inundated for a prolonged
3 period of time, in every occasion we have hydric soils
4 except under extenuating circumstance where somebody's
5 done something to the soil. In this case, we had that
6 in Wetlands 2 through 8.

7 In this particular instance, we were not able
8 to take those cores to a laboratory. We tried. I
9 couldn't get them there quick enough, and I did not
10 feel comfortable. This would have violated my
11 methodology as far as, you know, getting the samples
12 prepared properly and getting them to a lab at a
13 university or someplace where they could be identified
14 by a soils scientist.

15 So, what, in fact, we did was we retained two
16 soils experts that you're going to hear from after you
17 hear from me that actually did a takeoff on our
18 methodology, repeated some of the work that we did,
19 just to be able to confirm what I thought I had seen
20 out there; and from the eyes and the knowledge of two
21 respected soils scientists, get their opinions on what
22 is within that particular area that I refer to as

1 Wetland Number 1.

2 I want to close by just spending a few minutes
3 talking about forests. We haven't spent a lot of time
4 talking about forests in this case, but it is an
5 issue.

6 So, if you look at what my team did on the
7 site since March of this year, we basically started
8 out doing an ecological history. What's there now,
9 what was there in the past, and what was done? What
10 kind of activities took place to lead up to the
11 existing conditions, to be able to tell a story?

12 And in this case, I'm telling the story to
13 you. And one of the most important things in an
14 ecological history is being able to establish some
15 kind of a reliable record. Thank goodness we have
16 good technology today. We didn't have it when I first
17 started my career, but today, we have a lot of things
18 available to us that we didn't have then. We have
19 excellent, for instance, excellent aerial photography.

20 So, when we look at the series of aerial
21 photographs that we were able to obtain that basically
22 run from the early 2000s until 2016, what we see is,

1 we know that when the--when the owner took control of
2 the property, the cattle were moved off the property,
3 and the maintenance of the property changed to a
4 different kind of maintenance. It was no longer
5 maintained as pasture, for instance.

6 So, the trees began to grow. So, this
7 particular series of slides that I'm going to show
8 you--now, you can actually see over time how the
9 forest developed. And we go from the first
10 photograph, which was 2005, I believe, to this
11 photograph, which is 2010. And you can see just
12 within that five-year period how the forests have
13 expanded in this.

14 And how did we measure that? Okay. We--doing
15 a measurement in--this year tells us nothing that's
16 reliable about what was there even last year, let
17 alone five or ten years ago. So, this is where the
18 good aerial photography and being able to interpret
19 them is important.

20 And what we're doing is looking at canopy
21 closure. And it's not just the canopy trees, but it's
22 at more than one level. It's at least at the canopy

1 and subcanopy level. So, you can even have over
2 100 percent canopy cover, you see--not closure--simply
3 because you're measuring more than one strata.

4 So, that's how we made this determination and
5 it's a very conservative determination of where we
6 found 70 percent or greater canopy closure on the site
7 at each of these dates that I'm showing in this series
8 of aerial photographs.

9 And by the time we get closer to 2016, say 2013,
10 all right, we actually had a small--we had a decrease
11 in forest canopy area on the--on the property.

12 And at that time there was some clearing going
13 on. We had some development--the clearing for
14 development putting in some roads. And then there was
15 also some cutting of trees that were done by others on
16 the property that diminished the vegetation, including
17 the tree cover, on the site.

18 So, finally, you know, the wildlife. And, you
19 know, I apologize for not giving them much time. But,
20 you know, they're important too because, you know,
21 depending upon the quality of the ecosystem, so goes
22 the biodiversity on the site.

1 You know, we found, you know, wetland
2 dependent wildlife on the site as well as
3 forest-dependent wildlife on the site.

4 I want to close just by saying about what now?
5 Because of the fact that I believe the restoration of
6 the Las Olas site is attainable. And, in fact, given
7 the kind of restoration that we look at in ecosystems
8 around the world, this one is actually fairly
9 straightforward and simple.

10 Number one, we're in the Tropics. Things grow
11 really fast. All right? It's not like working in a
12 temperate wetland in Northern Ontario. So, we have a
13 round-the-year growing season that accelerates during
14 the wet season.

15 So, what's actually required to restore this
16 site and put the ecosystem back together is basically
17 to reverse the existing drainage where the roads are
18 cut into the hillsides with ditches, where ditches
19 have been constructed across a wetland, like in
20 Wetland Number 1, removing at least some amount of the
21 fill in Wetland Number 1 to make it--to make it whole
22 again.

1 The forest. You just need to leave them
2 alone. Walk away from them, you know. Keep people
3 from destroying them, from burning them. And they are
4 going to recover on their own.

5 What this will allow is for a landowner who
6 wants to develop the property to use the information
7 like what we have generated for this proceeding then
8 to develop a conceptual development plan, one that's
9 actually sustainable. And by "sustainable," I mean
10 the forest will be sustainable as well as the human
11 development will be comfortable and sustainable.
12 Because what you would be doing would be conserving
13 and protecting the wetlands and the forests that are
14 associated with those wetlands and then integrating
15 that into your development plan.

16 That's what we do today. Not just my firm,
17 but that's what we do--we strive to do all around the
18 world today. So, I thank you for your time and I
19 welcome your questions.

20 PRESIDENT SIQUEIROS: Thank you, Mr. Erwin.

21 MR. BURN: Thank you, sir.

22 CROSS-EXAMINATION

1 BY MR. BURN:

2 Q. Now, Mr. Erwin, I have to put you on notice
3 the late hour and, frankly, my inefficiency earlier in
4 the case means I'm going to be very focused about the
5 questions I put to you.

6 And I apologize now if I end up--if I end up
7 interjecting, if I think you're straying beyond the
8 scope of the question.

9 A. I'll try--I will not do that.

10 Q. But let me thank you, first of all, for
11 presenting within the scope of your reports.

12 Now, first of all, can you go to your second
13 report? If you could turn to Appendix A within that
14 report. I want to explore some points relating to
15 vegetation with you. Now, this is about 50 or so
16 pages into--

17 A. What paragraph are you looking at?

18 Q. I'll take you to that in a second. But if
19 you'll just get to Appendix A.

20 A. Oh, appendix.

21 Q. Appendix A.

22 Just make sure the Tribunal has it as well.

1 It's about 50 pages into the second report or
2 thereabouts.

3 Now, if you could move within that appendix to
4 Page 9.

5 A. I haven't found Appendix A yet.

6 Q. Right. So, go to Table 2, which is on Page 9.

7 A. If you've got somebody who can find it
8 quicker, you might want to do that, because I don't
9 want to waste your time.

10 Q. Right. That's very kind.

11 A. Why don't we do that on every occasion so that
12 we can go through them quickly.

13 Q. Right. Yeah, I agree.

14 Now just while it's being found for you--

15 A. He can't find it either.

16 Q. So, while that's being found for you, let me
17 just introduce a point.

18 So, in this section of your second report, you
19 summarize your observations and findings with respect
20 to vegetation on-site. You see that?

21 A. Yes, sir.

22 Q. So, you start--Page 9 you see Table 2 down at

1 the bottom, and you have a summary table. And we see
2 the now-familiar distinctions drawn in columns, so we
3 have U--a column "U" for Uplands, "W" for Wetlands,
4 and "W/U," Wetland or Uplands, and then a "Total"
5 column. And that's broken down by rows according to
6 what I will annoyingly, from your point of view, call
7 the alleged wetlands.

8 So, we see that all summarized in Table 2.
9 Arithmetically, you will have no difficulty in
10 confirming for me that of the 108 species observed
11 across the eight alleged wetlands, only 14 are purely
12 wetland species. Arithmetically, you accept that as a
13 correct statement? Yes?

14 A. I haven't counted them lately, but I am sure--

15 Q. Well, you see, you, in fact, have totaled it
16 up. If you look at the Total column--

17 A. I'm not disagreeing.

18 Q. There you go. There you go. It's very nice
19 to have some consensus.

20 Now, if we look down--I just want to explore
21 some of this--some of these observations a little with
22 you. You have heard Dr. Calvo and Dr. Langstroth

1 address this during their testimony earlier today.

2 In Table 3 immediately below, what we see is a
3 summary of the observations--the vegetation
4 observations in respect to Wetland 1. Now, just so
5 that--because you have to understand I am merely a
6 lawyer.

7 Sorry. I think you're moving on. We're still
8 on Page 10 of Appendix A. I'm merely a lawyer, so I
9 just want to make sure that we have this properly
10 understood.

11 The table that we see there that has across
12 the top "Family," "Species," "Strata,"
13 "Environment"--misspelled actually, environment.
14 Anyway. We'll leave that. "Coverage."

15 Now, that table is broken down, as I
16 understand it, where you have slightly thicker lines
17 between sections. The first five families
18 are--reflect your observations in respect to the
19 canopy; is that right? So, you see--

20 A. That's correct. "Strata C" is canopy.

21 Q. Thank you.

22 And the next--longer section that continues

1 over to the next page, right down to the penultimate
2 line, those observations are the ground--that's the
3 ground vegetation, isn't it?

4 A. Ground cover.

5 Q. Ground cover, right.

6 And then the last one--it's only one on this
7 one, but we'll come to another one in a second which
8 is a little longer. The last one there is shrubs; is
9 that right?

10 A. "Subcanopy."

11 Q. "Subcanopy."

12 A. Which you could often say might be shrubs but
13 could be small trees.

14 Q. Right.

15 So, just going back to the Canopy section of
16 Wetland 1, which, of course, is the alleged wetland
17 that occupies a lot of the attention of the Tribunal
18 in this matter. What we see in the Canopy section is
19 that the proportion that is taken up with purely
20 wetland species is precisely 0 percent. You would
21 agree with that?

22 A. No, I don't because I'm not agreeing with your

1 definition or Dr. Calvo's definition of--

2 Q. When I say--these are your--these are your
3 definitions.

4 A. No, no. I'm looking at--at, you know,
5 Wetland/Upland, W and U, as something that would be
6 facultative wet in this case.

7 Q. And it could be--

8 A. You might choose a better example other than
9 Wetland Number 1 since Wetland Number 1 is disturbed.
10 The trees have been cut down and the site cleared.

11 Q. That's what you say.

12 A. That's what I know.

13 Q. It could also be facultative dry, couldn't it?

14 A. And it could.

15 Q. So, a W/U could be facultative dry, so it
16 could be nothing to do with wetlands at all.

17 A. Oh, no. That's not true. If you look at the
18 definition of what fac wet and fac up is in a document
19 like the 1987 Delineation Manual published by the U.S.
20 Army Corps of Engineers, that really is the bible of
21 definitions on how to delineate a wetland. Can be
22 applied anywhere in the world. And we've done that.

1 Something that is facultative wet means that
2 typically you're going to find that species 67 percent
3 of the time in a wetland and the remainder of the time
4 in a nonwetland.

5 Q. Right.

6 A. Facultative up is just the opposite. Just
7 switch the numbers. 67 percent of the time in an
8 upland, the remainder of the time in a wetland. Has
9 nothing to do with whether that is actually a wetland
10 plant or not when you see it in a particular location.
11 Understand that you're not just looking at the
12 vegetation.

13 Q. Thank you.

14 But just to be clear, you have presented data
15 in which you've identified vegetation that can be
16 purely indicative of a wetland and vegetation that
17 might be indicative of a wetland. That is a very
18 important distinction to draw here because the
19 Tribunal is asked by the Respondent to believe that
20 there are--there are, and were, five years ago
21 wetlands on-site.

22 And they--the data you have presented shows,

1 as I say, that there is precisely 0 percent in the
2 Canopy section of Wetland 1, which you observed in
3 2016 which is purely wetland vegetation.

4 If we go down to the Ground section there
5 is--you do make some observations of--of purely
6 wetland species. But those--if we turn over the page,
7 we can talk them up and we can see that the total
8 amount of purely wetland species that you observed in
9 Wetland 1 in the Ground Cover section is 14 percent.

10 So, 86 percent of your observations were of
11 species that had--that were not purely indicative of
12 wetlands. You would accept that?

13 A. Sir, I'm going to chalk up your misstatement
14 to the fact that you're an attorney. Okay?

15 Q. That's very kind.

16 A. The fact of the matter is I'm going to try to
17 explain, once again, all right? That hydrophytic
18 vegetation can be facultative wet, or it can be
19 obligate wet. It can even be facultative up.

20 You're not just looking at a name on a list.
21 All right? You need to be out on the site, and you
22 need to be out there actually following a methodology

1 that a professional wetland scientist would subscribe
2 to.

3 We were standing in the water or standing on
4 saturated soils that had been inundated for weeks,
5 many weeks. So, we were not looking at a dry, upland
6 condition with plants that could go either way. We
7 were standing in water.

8 Q. With respect, Mr. Erwin, that's not the point.
9 I don't doubt that you were standing there in water as
10 you said that.

11 I am simply showing you your own observations.
12 And what we see is that the--it's very much in the
13 minority, the number of purely wetland species.
14 That's the only material on which--

15 A. But I'm not--

16 Q. No. That's the only material--

17 A. I'm not subscribing to your definition at all.

18 Q. That's the only material in which this
19 Tribunal, given the definition of a wetland, has to
20 have hydrophilic vegetation. That is the only
21 vegetation on which this--this Tribunal can believe
22 that there is something--this criterion within the

1 definition of a wetland is satisfied.

2 My point to you is there is none in the Canopy
3 section in Wetland 1. There is only 14 percent in the
4 Ground Cover section in Wetland 1. The data is in
5 front of us.

6 A. No, it's--with all due respect, all right,
7 what you're doing is you're taking this data
8 completely out of context. The fact of the matter is
9 I wouldn't expect to find canopy vegetation in a marsh
10 like this. No--you don't have trees in that kind of a
11 wetland system. Maybe an occasional palm tree.

12 But for the most part what you're finding is
13 herbaceous vegetation, grammanoids, grasses, and not
14 canopy vegetation.

15 So, if you tell me there's no canopy species
16 there, it's like, "Okay."

17 Q. Right.

18 A. "So what?"

19 Look at what else is there.

20 And let me finish, please. The fact that
21 you're giving me a misconstrued lay definition of
22 hydrophytic vegetation that doesn't fit what--what

1 wetland ecologists would apply to identifying wetlands
2 on a landscape.

3 Q. I repeat, sir. I'm only looking at the data
4 you've presented.

5 A. And so am I.

6 PRESIDENT SIQUEIROS: Now, Mr. Erwin, Mr. Burn
7 is the one who is asking the questions. So, please be
8 reminded that--answer the questions. If you wish to
9 make any comment at redirect, Mr. Leathley may address
10 those.

11 MR. BURN: Thank you, sir.

12 BY MR. BURN:

13 Q. Now, I can take you to the data for Wetland 8.
14 The significance of Wetlands 1 and 8 being that those
15 are the only areas for which there is soils data in
16 front of the Tribunal.

17 So, everything else cannot be considered
18 within this arbitration for categorization as a
19 wetland because the Respondent has itself limited the
20 amount of data that is put forward to justify itself.

21 Now, if you look at--and you can go--I think
22 you're already there--Page 25 to 27 within Appendix A.

1 You can see the data you present with respect to
2 Wetland 8.

3 Now, you, of course, are going to maintain
4 your position that you don't accept my way of
5 characterizing this data. But we can see, can't we,
6 that the amount of purely wetland vegetation observed
7 for the canopy in this section is 0 percent. The
8 amount of purely wetland vegetation observed for the
9 Ground Cover section, 6 percent. The amount of purely
10 wetland species observed for the shrubs or
11 Ground--Ground Cover section--I forget--the Shrub
12 section, I'll call it, 5 percent.

13 So, again, what we see here is you confirming
14 that there is not much by way of pure--purely wetland
15 vegetation that you observed.

16 THE WITNESS: May I clarify?

17 PRESIDENT SIQUEIROS: Please answer the
18 question and then clarify. But remember Mr. Leathley
19 has the opportunity to further those issues upon his
20 redirect.

21 BY MR. BURN:

22 Q. Do you accept my summary?

1 A. No, I don't.

2 Q. Thank you.

3 Now, finally, on the subject of vegetation.
4 You would accept, wouldn't you, that the criticisms
5 made of the data presented, the criticisms made by
6 Drs. Calvo and Langstroth earlier today, that the data
7 weakened with the second report and became less
8 reliable? You would accept that those criticisms are
9 fair, wouldn't you?

10 A. No, not at all.

11 Q. Okay. Moving to the next topic. Now, first
12 of all, just in terms of--I guess it's a question of
13 methodology.

14 During your second--for the--your second
15 report, your methodology didn't change as compared
16 with the methodology you adopted in your first report;
17 right?

18 A. I actually believe it did, and I explained how
19 it did.

20 Q. Your methodology changed? Your approach
21 changed?

22 A. Yes. Because what we did was we--we were

1 locating the approx--we were determining whether there
2 were wetlands on the site in the first report.

3 In the second report, on that second visit, we
4 really focused on, "Okay. We know there's wetlands
5 there. What are the boundaries, to be really fair to
6 everybody concerned?"

7 So, we did the best we could doing a
8 delineation based upon the conditions that existed at
9 the time.

10 Q. Right. But when you went for the second
11 visit, of course, it was in the wet season. You will
12 accept that around that time--I think the--there was a
13 lot of rain at that time. Around the nine-day period
14 around your second visit, the data suggests there was
15 2 1/2 thousand millimeters of rain.

16 Does that accord with your memory of the
17 conditions during your second visit?

18 A. There was--one reason for doing the site
19 inspection at that time was because of the inundated
20 conditions because it really helped us refine our
21 boundaries and made them more concise, more fair to
22 everybody concerned.

1 Because we not only could see where the areas
2 were inundated, but we could see where water was
3 leaching out of the slopes coming down into the
4 wetland. So, it was very important to be able to--you
5 know, to do it at that time.

6 Q. Okay. Now, you referred during your
7 presentation to observing changes on-site and that all
8 of this could be put--could be restored so that the
9 land could be made whole again.

10 Now, you do understand, don't you, that the
11 Municipality issued construction permits in respect of
12 the works that the Claimants did on-site? You
13 understand that, don't you?

14 A. Sir, I would have to defer that to somebody
15 like Ms. Vargas who actually understands construction
16 regulations more than I do.

17 Q. So, when you talk about making a site whole
18 again, the implication being that it has been made
19 less than whole, you weren't even told that there were
20 construction permits issued in respect to the work
21 done? Is that--is that your evidence?

22 A. No, it's not. I know that work was done on

1 the site.

2 Q. With permits?

3 A. That's debatable.

4 Q. What?

5 A. You asked me a question. I'm giving you a
6 response.

7 Q. Okay. Now, in respect of culverts, if you
8 could just flick to your first report. Now,
9 Paragraph 57 of your first report, which you should
10 find at Page 16 of your first report, you say that
11 "All wetlands observed on-site flow offsite directly
12 through culverts across roads or via sheet-flow to
13 adjacent properties."

14 A. For the most part, except for Wetland
15 Number 1.

16 Q. Right. Although that's not stated here, but
17 I'll accept the qualification.

18 Did you observe the flow of water offsite
19 through culverts?

20 A. At that time, no. We were looking at
21 hydrologic indicators. And we can determine which
22 direction the water flows just by looking at

1 indicators.

2 Q. Are you aware that a lot of the culverts were
3 blocked either in whole or in part?

4 A. I didn't see any that were blocked in whole,
5 but there were certainly a number of them that were
6 silted in to some extent.

7 Q. Do you remember during your second site visit
8 the Municipality was actually doing works in relation
9 to culverts on the eastern side of the site?

10 A. They were cleaning out the culvert in Wetland
11 Number 8.

12 Q. And you remember there being a bulldozer and a
13 number of workers from the Municipality doing that
14 work?

15 A. Yes, sir.

16 Q. And those municipal workers were moving earth;
17 they were installing a culvert; they were creating a
18 cement wall for the culvert? You remember all of
19 that?

20 A. Yes.

21 Q. And you appreciated and you appreciate now
22 that the Claimants weren't doing any of that work?

1 A. No. I believe the Municipality was doing it
2 because the water that was flowing through Wetland
3 Number 8, the stream was actually causing some erosion
4 of the--of the near banks of the road. So, they were
5 doing that to actually protect the highway, I believe.

6 Q. Why didn't you include anything in your report
7 on this, any photographs or any reference to the fact
8 that you were observing works in culverts done by the
9 Municipality?

10 A. Well, I could have. But, frankly, it would
11 not--it didn't have any bearing on whether there
12 was--whether Wetland Number 8 was a wetland or not.
13 This kind of maintenance happens all the time in
14 municipalities.

15 Q. Right. It does.

16 Now, at Paragraph 69 on Page 25 of your first
17 report, you say, "The construction of the roads,
18 excavation of ditches, placement of culverts, and the
19 removal of vegetative strata of the forest have
20 dramatically decreased the capacity of the forest to
21 properly store and naturally convey water."

22 Do you see that?

1 A. Yes.

2 Q. Do you know who created these culverts?

3 A. The landowner did.

4 Q. What's your evidence for that?

5 A. Well, the culverts that I was looking at were
6 under the roads that were developed in the Las Olas
7 System. So, I guess somebody else could have put them
8 there.

9 But the works that I was looking at was
10 associated with the improvements of the land that was
11 going up along with the development of the lots at Las
12 Olas.

13 Q. Can you show me that in your report?

14 A. Well, that's what you're looking at in
15 Photograph Number 6, for example, on Page 21. That's
16 a culvert across a road to connect the drainage ditch,
17 which I'm actually standing in taking the photograph,
18 and the water flows through that drainage ditch into
19 that culvert under the road.

20 And you can actually tell the elevation on the
21 other side is a little lower if you look in the
22 background.

1 Q. Right. Can you turn to Tab 12 in the file.

2 A. Tab 12. I don't have a Tab 12. Oh.

3 Q. Now, this is a letter from the Municipality
4 dated the 10th of April, 2008, to Inversiones Cotsco.
5 Now, you see that the Municipality at the time was
6 writing to say that it would build a canal passing by
7 the perimeter of your property and that such works had
8 been accepted by the Municipality of Parrita?

9 A. If you're going to want me to read this
10 document in Spanish, it's going to take me a while.

11 Q. You should--if you just go on, there should be
12 a translation behind it. Behind the blue page.
13 Apologies. I should have indicated that.

14 Is that right?

15 So, you can see that the Municipality in 2008
16 is writing to invite collaboration--

17 A. Would you give me a second to--

18 Q. Sure.

19 A. Okay. Thank you.

20 Q. So, you would accept that the--it's at least
21 possible that some of the historical work in relation
22 to culverts and so on was actually being done by or in

1 collaboration with the Municipality; right?

2 A. Well, this is talking about a perimeter canal.

3 Q. Across the perimeter.

4 A. "Around the perimeter of your property." It
5 doesn't say "across." It says, "Construction of the
6 canal around the perimeter."

7 And that would be on the side of the road
8 because the perimeter--the property is bounded by
9 roads, at least on three sides, and on the fourth side
10 by an existing condominium development.

11 Q. Right. But just to be clear, in respect to
12 the perimeter--

13 A. Yes, sir.

14 Q. --you would accept that this type of
15 documentation confirms that works in relation to
16 culverts and the like could and in some cases was work
17 done by the Municipality or done in collaboration with
18 the Municipality? You accept that?

19 A. It looks like it's--yeah, it looks like it was
20 done in association with, actually, the drainage on
21 the road, though, to be honest with you.

22 Q. Right.

1 A. Not drainage on the site.

2 Q. I'd like to move on to the question of
3 forests. Can you just look on the screen? And can
4 you also turn to your first report, Paragraph 43.

5 And Paragraph 43 begins on Page 8 of your
6 report, but it's one of those long paragraphs in which
7 you set out various definitions. The definition I
8 just wanted to take you to is on Page 10, definition
9 of a forest under Costa Rica's Forestry Law,
10 Article 3.d.

11 My colleague is just going to help by putting
12 a screen in front of you, I think.

13 Well, in any event, apparently, there's a
14 problem with that screen, perhaps we could just move
15 on.

16 So, you agree that the--this--the text of the
17 definition at Article 3.d sets out the technical
18 quantitative requirements that must be met for the
19 definition--under the definition of a forest? Do you
20 accept that in order for there to be a forest, the
21 observations need to accord with each of the criteria
22 listed in Article 3.d? Do you accept that?

1 So, we must have--do you accept--

2 A. So, you're just looking at--

3 Q. 3.d, Page 10, right at the top.

4 A. 3.d, Page 10.

5 Q. So, if you look at the top of Page 10 of your
6 report, "Definition of forest and resulting
7 limitations." See there? And just underneath that--

8 A. Yes, sir.

9 Q. --you set out in English--

10 A. I've got it now.

11 Q. So, you accept that this is--these are the
12 technical requirements for a forest to be identified?
13 Yes?

14 A. Yes.

15 Q. And what we have to find is mature trees
16 covering more than 70 percent of the surface with more
17 than 60 trees per hectare of 15 or more centimeters in
18 diameter measured from the height of the--at the
19 height of an adult breast. I think Mr. Leathley
20 described this on Day 1 as--in American vernacular--"a
21 doozy."

22 So, if we look on in your report to Paragraphs

1 53 and 54. So Page 13.

2 A. Paragraphs 50?

3 Q. 53 and 54.

4 You make various observations, and you say
5 that the Las Olas site has "various percentages of
6 canopy closure."

7 A. Yes, sir.

8 Q. Did you make a measurement of more than
9 2 hectares for the purposes of your first report?

10 A. Using the aerial photography, yes, we did.
11 And we had also conducted a site visit to be able to
12 corroborate that.

13 Q. And did you measure at least 70 percent of
14 canopy cover?

15 A. Yes. And, as I explained, we were pretty
16 conservative with our application of that canopy
17 closure. But understand, that's not just the--what
18 you see at the top of the trees; that's also the
19 substratum as well.

20 Q. Right. Where will I find that in your report?

21 A. That's in the--that's in the definition of--

22 Q. No, not as a matter of definition. Where is

1 your observation that there were at least
2 70 percent--there was at least 70 percent canopy
3 cover?

4 A. Well, that's what we applied. We wouldn't
5 have called this forest unless it met that
6 70 percent--

7 Q. Right.

8 A. --canopy closure because there's--there are
9 areas on the site, as we delimited, that don't have
10 that degree of closure.

11 Q. Right. So, the answer is it's not stated
12 expressly; we're just meant to imply it, infer it into
13 what you've expressed in your first report; is that
14 right?

15 A. Well, I think it's more than implied. I mean,
16 we didn't use somebody else's definition when we said
17 "here's what the canopy was" that we measured. We
18 applied the definition that I have in the report here.

19 Q. All right. And where will I find reference to
20 you having measured more than 60 trees per hectare
21 with 15 or more centimeters in diameter measured at
22 the height of an adult's breast? Where is that?

1 A. It's not because we did not measure trees.

2 Q. It's not there. Thank you. Right. Thank you
3 very much.

4 But one thing I think we probably can agree
5 on, if you just look on the screen, you can--if we
6 just move on from the 1997 image to 2002. So, this is
7 2002. And look at that image, with which you'll be
8 familiar, you can see that there isn't a forest
9 on-site at this point in time meeting these criteria;
10 is that right?

11 A. That's a really bad reproduction, but I'll
12 give you the benefit of the doubt. Because I have the
13 2002 image. I know what it shows.

14 Q. Right. So, you would agree that that 2002
15 image shows that at that point in time, at least,
16 there isn't forest cover that meets the definition of
17 Article 3.d of the Forestry Law; right?

18 A. I would say that there's less of it than--

19 Q. No, perhaps you can just answer my question.

20 A. Well, I can't say that there's none. I mean,
21 you're going to have to give me some time to work on
22 that aerial photograph and actually delimit those

1 areas.

2 Q. Okay. Maybe we can move on to 2005.

3 You can see, can't you, that there
4 isn't--just--just by a simple observation, you can see
5 there isn't nearly enough tree cover to begin to get
6 close to the definition in Article 3.d; right?

7 A. It sounds like you're trying to convince me.
8 I mean, I'll give you an honest response that there
9 is--

10 Q. That would be nice.

11 A. --the canopy--because we looked at 2005. And
12 the areas that meet the definition of--as we--I
13 believe we said it in our report--at that time are,
14 really, for the most part, restricted to the areas in
15 the eastern third of the property and some areas along
16 the wetlands to the east. But these are not very
17 large areas, but they're there.

18 Q. Thank you.

19 Now, you would accept, wouldn't you, that the
20 characterization that the Claimants have provided that
21 when they bought the land, it was recently used as cow
22 pasture, that would look about right, wouldn't it? It

1 looks like it's cow pasture from an image like that,
2 doesn't it?

3 A. Actually, the image you showed me from '97 is
4 more convincing.

5 Q. Right. Because--

6 A. By 2005--

7 Q. You can see that the vegetation is
8 developing--

9 A. There's a lot of trees on the property. Just
10 because they don't meet the strict definition of Costa
11 Rican forest doesn't mean there's not trees on the
12 property.

13 And the fact that by this time the cattle have
14 been off the property for three years. And especially
15 in the Tropics, that allows trees to grow pretty
16 rapidly.

17 MR. BURN: Just one second.

18 THE WITNESS: Sure.

19 MR. BURN: No further questions, sir. Thank
20 you very much for your time.

21 THE WITNESS: Thank you. You're welcome.

22 PRESIDENT SIQUEIROS: Mr. Leathley.

1 MR. LEATHLEY: Thank you, sir. Just a few
2 points of follow-up to allow Mr. Erwin an opportunity
3 to supplement his answers that he was giving to
4 Mr. Burn.

5 REDIRECT EXAMINATION

6 BY MR. LEATHLEY:

7 Q. Mr. Burn asked you a question, Mr. Erwin,
8 regarding the vegetative position. And as was, of
9 course, Mr. Burn's right, he limited you just to the
10 short answer to his question.

11 Is there anything you would like to clarify
12 regarding that? And I'm thinking in particular to the
13 tables and the facultative wet and the tables you were
14 being shown and the percentages that Mr. Burn was
15 representing had a significance of--of--for the
16 Tribunal.

17 A. I'm going to choose my words carefully.
18 People like myself--scientists can do a lot with data.
19 You know, we can use it to accurately record or report
20 a condition or a trend. In this case on a piece of
21 property. Or we can bias how we look at that data by
22 just cherry-picking certain things out of that

1 information and only selecting results or data that
2 would support the outcome that you're interested in.

3 And this is neither appropriate or--or--or
4 good science. It doesn't give us an honest
5 interpretation of what we're actually looking at on
6 the site. I mean, they failed to recognize the fact
7 that there are many dozens of plants out there on the
8 site that are wetland plants.

9 We disagree on the fact that if it's not an
10 obligate wetland, then it's not a wetland plant. That
11 doesn't hold true. I've never heard that application
12 anywhere by, you know, reputable, you know, scientists
13 that deal with these areas like we do.

14 And there are some upland plants in there.
15 But for the most part, you know, what we're calling,
16 you know, W/U, those facultative plants, are--are
17 wetland species.

18 And remember--and I didn't really get into the
19 detail in this on my presentation. But those
20 wetlands, except for 6, 7, and 8, which are located on
21 the east side of the property, those are forested
22 wetlands. So, we would expect to find some trees in

1 and around those wetlands.

2 The wetlands on the east--western side of the
3 property--1, 2, 3, 4, 5--are marshes. You might find
4 some trees. But for the most part, those are
5 systems--wetland systems that have an abundance of
6 grasses and herbaceous species and very few trees. If
7 they had trees in them, they would be a swamp, you
8 see.

9 So, that's why you're not finding--so, to
10 select that out and say, "Oh, we don't have any canopy
11 there, it's not a wetland," that's not--that's not
12 appropriate.

13 Q. Thank you, sir.

14 Another question you were asked regarding the
15 data set for your second report?

16 A. Yes, sir.

17 Q. And there had been a comment by Mr. Burn,
18 which I think was building off the testimony earlier
19 today from ERM. Why would you not agree that the data
20 set for your second report was weakened?

21 A. Well, I feel in the second report we really
22 focused, when we were looking at the vegetation, on

1 having not just a complete list, but a list that was
2 done by Costa Rican experts where we did some homework
3 to--Costa Rica does not have a wetland plant list like
4 we have in the United States. All right?

5 So, in the absence of that, to be able to make
6 that kind of determination, you have to rely on the
7 local expertise and the fact that there is some
8 judicious peer review going on when you're putting
9 that list together. You're not just looking at one
10 source, but you're looking at as many sources as you
11 can to be able to make that decision on that
12 particular species.

13 Q. And, generally so, did you have any reaction
14 to the testimony of ERM?

15 A. Yes. I mean, we gave them more data to
16 cherry-pick. I mean, what they did was they looked at
17 species that are W/U and just made an arbitrary
18 decision that these are not real wetland plants, you
19 see.

20 So--and, in fact--and, in fact, they are. So,
21 that was the main problem I had with that portion of
22 the testimony.

1 Q. And then just one final question, sir. I
2 wonder if you'd like to clarify what you were
3 explaining to Mr. Burn regarding your position on the
4 measurement of the trees in the context of the forest
5 series of questions that Mr. Burn put to you.

6 A. Sure.

7 For the context of this proceeding, what
8 matters is what was there in those years 2008, say,
9 through 2011 or '12. And we can't go back and measure
10 any trees at that point, as far as looking at the
11 diameter/breast height, you know, in the--in the
12 forest.

13 So, the only thing that you can do is evaluate
14 the aerial photographs, like we did, to determine what
15 the degree of canopy closure was in those areas.

16 Even if we had been asked to do those
17 measurements today, much of what we would have been
18 measuring was cut stumps, because of all the trees
19 that were being cut down, all of the saplings, very
20 little in the way of midstory is left or was left at
21 the time of our inspection in late August. And much
22 of the ground cover had been chopped up to the extent

1 that the vegetation had been severely impacted.

2 Now, that will recover, but it doesn't allow
3 you to go in there and do any measurements. So, if
4 you would have sent a team in to do those kind of
5 measurements, they would have had to make note of the
6 impacted conditions on the site because they wouldn't
7 have been able to do DBH with a stump that's just cut
8 a little bit above the ground.

9 MR. LEATHLEY: Okay. Thank you, Mr. Erwin. I
10 don't have any further questions.

11 THE WITNESS: You're welcome.

12 PRESIDENT SIQUEIROS: Mr. Nikken? Mr. Baker?

13 QUESTIONS FROM THE TRIBUNAL

14 ARBITRATOR BAKER: Why was the decision taken
15 not to take soil samples at Sites 2 through 7?

16 THE WITNESS: The work that we were doing out
17 there--let me start over again.

18 The way that we typically go about our work in
19 identifying wetlands and mapping wetlands. And I'll
20 use this case. For Ramsar--which I have done hundreds
21 around the world just for Ramsar--has never involved
22 taking soil samples. It has always involved looking

1 at, first, the hydrology and then the vegetation. All
2 right?

3 And even in my own private practice, it's very
4 rarely done. If we have the hydrology and we have the
5 vegetation, we know we're going to have the soils.

6 The only time that we do it is in situations
7 like this where it's in arbitration or litigation,
8 where the site has been impacted. We've done work,
9 for instance, for the U.S. EPA, here in the U.S.,
10 where we've had to go out and look at sites that have
11 been cleared. They have been drained.

12 They bear, really, no semblance to a wetland
13 except to somebody like me who can still look at the
14 morphology until there was something there. But in
15 that case, we are actively doing soil sampling to look
16 at artifacts. Because the hydric soils don't
17 disappear because of drainage.

18 So, we really focused our soils activity on
19 Wetland Number 1. But that doesn't mean I didn't dig
20 some soil pits in those other wetlands during my first
21 trip, which--which I did, you see.

22 But, again, we weren't there to delineate

1 wetlands, and we weren't there, surely, to do soil
2 sampling because we just had too much on our plate.

3 Because at that time, again, we didn't know
4 what the property held as far as wetlands or no
5 wetlands on the property.

6 We go back to the site in August and those
7 wetlands are under water. And I've got the
8 hydrograph. I've got the data that shows how long
9 they've been under water. So, I don't need to be
10 convinced now because I'm sure that those conditions
11 have generated hydric soils.

12 And if you go back today and you work between
13 my blue lines there, I can assure you you're going to
14 find hydric soils in those areas because the
15 inundation has been prolonged enough to generate the
16 anaerobic conditions in the soil which create hydric
17 soil indicators.

18 ARBITRATOR BAKER: So, then, how do you
19 account for the differences that Mr. Baillie found and
20 testified to for his core samples?

21 THE WITNESS: Honestly, I don't think they
22 looked at enough. When I go in, I go in with open

1 eyes. I'm looking at everything that I can look at,
2 whether it helps my client or hurts them, no matter
3 who the client is. And if you don't look at a large
4 enough area, that hurts you. If you don't dig a hole
5 deep enough, that hurts you.

6 ARBITRATOR BAKER: Did you recommend--you're
7 obviously very familiar with contested procedures,
8 administratively, Corps of Engineers litigation.

9 Did you recommend that there be core samples
10 be done at 2 through 7 so that this Tribunal could
11 have an apples-to-apples comparison?

12 THE WITNESS: It was--it was our intention to
13 be able to do some kind of soils analysis if we--if we
14 could. But the area of contention was really Wetland
15 Number 1, not 2 through 8, because no work had been
16 done in those areas yet. And if those were under
17 contention, I would have elevated, you know, the--the
18 work to include soils analysis.

19 But I conducted that work just like I do--have
20 done for other agencies in this country and throughout
21 the world for--for Ramsar.

22 ARBITRATOR BAKER: I understand that. It's

1 just that we're left with the situation now where we
2 have an imminent soils person who looks at the
3 definition of "wetlands" and says, "You need all three
4 things, and it doesn't exist in these areas for
5 soils."

6 And we hear your testimony from, obviously,
7 someone who is imminently qualified as an ecologist,
8 who looks at it and says, "I looked at these sites,
9 and we've got two out of three here on the conditions
10 and, therefore, that tells me it's the third."

11 And, unfortunately, the Tribunal is left with
12 no apples-to-apples comparison.

13 THE WITNESS: I wish I could--

14 ARBITRATOR BAKER: So, how do you suggest that
15 we resolve that?

16 THE WITNESS: I think when you get the soils
17 experts up here, they're going to tell you what I
18 could tell you, but it's not coming from a soils
19 expert, is we had--

20 ARBITRATOR BAKER: But you were the team
21 leader is why I'm asking.

22 THE WITNESS: But we have--we have people that

1 did work on the site. It was not me. And we look at
2 what they did. And we look at how they describe the
3 areas, how they describe the soil samples that they
4 took. And I'm looking at that saying, "That's a
5 hydric soil. It's got mottling."

6 You only need to have one indicator to have
7 hydric soils. So, if it's got mottling, if it's got
8 gleying, it's hydric soil. So, despite the fact that
9 I didn't do it, others did.

10 And I'm looking at it going, "Yeah, that
11 makes--that makes sense."

12 So, I apologize for not being able to present
13 you with, you know, soils analysis on those wetlands,
14 but I believe you're going to hear some testimony on,
15 you know, what we reviewed that was done by others and
16 the fact that what they're describing are hydric
17 soils. Just like a lot of the work that some of the
18 others did, they were describing wetlands.

19 When they talk about like the wetlands on,
20 like, 6, 7, and 8, which are these stream systems,
21 when they describe a natural drainway, a light ought
22 to go off in your head that says, "Jeez, that's

1 probably a stream in this kind of a landscape."

2 ARBITRATOR BAKER: Thank you.

3 Thank you, Chairman.

4 PRESIDENT SIQUEIROS: I have a very specific
5 question. When you're examining whether there are
6 forests and you make reference to the definition of
7 forest in the Costa Rica Forestry Law, we also have
8 been identified during these proceedings that the
9 concept of a tree, a forested tree, has a very precise
10 definition itself.

11 So, as I understand it, in order for there to
12 be a forest in Costa Rica, you need to have forest
13 trees. Not any tree qualifies. Even though they
14 might be 15 or more centimeters in diameter measured
15 at the height of an adult's breast.

16 Did you make that determination? Did you--how
17 is it that you concluded--or left me rephrase that.

18 Did you consider these--and this conclusion
19 takes into account that the trees that you examined
20 are forest trees, or are they trees that grow very
21 rapidly in a very humid environment, but they're not
22 qualifying as forest trees?

1 THE WITNESS: Well, first of all, there's no
2 distinction like that. Doesn't matter whether it's a
3 slow-growing tree or a fast-growing tree or it's a
4 successional tree. Some trees come in earlier than
5 others.

6 But they still meet the definition of a tree
7 if it is 15 centimeters, about 6 inches diameter at
8 breast height, and it's a mature tree.

9 And an ecologist would tell you that when we
10 use that word "mature," it means being able to
11 reproduce. So, that would mean it's producing fruit.

12 PRESIDENT SIQUEIROS: My understanding is not
13 all trees qualify as forest trees. There might be
14 some. And I understand there are some because, under
15 the regulations to the Forestry Law, there is
16 precisely a definition of what a forest--a tree is for
17 purposes of the Forestry Law. You did not take that
18 into account?

19 THE WITNESS: No, we did under--first of all,
20 that distinction has to do with agriculture,
21 silviculture. So, if you're looking at trees that
22 were planted, they don't count. They're invisible.

1 And I think that's what we're talking about.

2 But I was having to do evaluations, you know,
3 after the fact, where we couldn't actually go in and
4 make a determination of tree size and height back in,
5 say, 2011. So, we had to rely on the information that
6 we--that we were able to get, which was aerial
7 photographs, to be able to do that.

8 PRESIDENT SIQUEIROS: Okay. Thank you.

9 THE WITNESS: You're welcome.

10 PRESIDENT SIQUEIROS: No further questions.

11 But, apparently, Mr. Burn may have one as a follow-up.

12 MR. BURN: I just can't let it go.

13 A couple of questions arising out of
14 Mr. Baker's queries. But there is actually something
15 arising out of Mr. Leathley's re-examination because
16 he took Mr. Erwin to the topic of cutting of trees,
17 which is not a subject in which I cross-examined.

18 So, I would be grateful if I could just be
19 indulged the opportunity to ask one question.

20 MR. LEATHLEY: Sir, I don't believe I did.

21 MR. BURN: You did. You asked about the tree
22 stumps and so on.

1 MR. LEATHLEY: I didn't use the word "stumps"
2 in any of my questions.

3 MR. BURN: Well, the answer came. I just want
4 to--all I want to--

5 MR. LEATHLEY: But it wasn't in the scope of
6 my question.

7 MR. BURN: I can go back to the transcript.
8 But, really, all--

9 MR. LEATHLEY: No. Please do. Because I have
10 not asked a question about cutting of trees.

11 MR. BURN: In any event--in any event--please
12 don't cut across me.

13 I--all I--

14 MR. LEATHLEY: Sorry. I'm making an
15 objection, if I may, Mr. President. I didn't ask a
16 question about tree cutting.

17 MR. BURN: Let me explain. Let me explain.

18 PRESIDENT SIQUEIROS: Let Mr. Burn pose a
19 question first and we'll know what his question is.

20 MR. BURN: I just wanted to point Mr. Erwin to
21 his own evidence, Paragraph 34(b) of his second
22 report. If Mr. Leathley objects to my pointing the

1 Witness to his own evidence on a subject that the
2 Witness has covered in re-examination, without it
3 being covered in cross-examination, well, that may be
4 fairly telling.

5 RE-CROSS-EXAMINATION

6 BY MR. BURN:

7 Q. But I would just invite Mr. Erwin to look at
8 Paragraph 34(b).

9 A. 34?

10 Q. 34(b) on--sorry. I don't have a page number.
11 And this, while you're finding it, just addresses the
12 question of squatters on the site, and you make the
13 observation that what you--

14 A. In the first report?

15 Q. Second report. Second report.

16 You say, at Paragraph 34(b), "As documented by
17 both the Claimants and within assorted agency site
18 visit reports, the Las Olas property has been invaded
19 by squatters who have established camps, and they are
20 actively engaged in vegetation management. This
21 activity appears to have been occurring uninterrupted
22 from 2012 to present, and the impact to the forest

1 canopy can be seen as a reduction of canopy coverage
2 during this period."

3 And this is part of your explanation in
4 Paragraph 34 as to why it's impossible to provide a
5 good point of reference because of what's
6 happening/happened on the site very recently?

7 MR. LEATHLEY: Yeah. So, I am going to make
8 my objection, Mr. President, because I don't believe
9 anyone during Mr. Erwin's appearance today has asked
10 any questions regarding the squatters on the land who
11 are no longer there.

12 PRESIDENT SIQUEIROS: Indeed, there has been
13 no examination on--

14 MR. BURN: I'm not going to maintain this
15 point. But, sir, it is correct to say the Witness
16 talked about observing tree stumps and so on. And
17 that's the point, is that he himself has observed that
18 there is--since 2012 to present--so all through the
19 period of his observations--there has been vegetation
20 management by squatters.

21 PRESIDENT SIQUEIROS: We take note of that
22 statement in the report from Mr. Erwin.

1 MR. BURN: Thank you. Just the couple of
2 questions on soils that flowed from Mr. Baker's
3 questions.

4 BY MR. BURN:

5 Q. You indicated that--well, you said it would
6 be--it would have been much better had the experts
7 presented by the Claimants taken soils data from
8 across the site. Do you recall that? Yes?

9 You said that there should have--Mr. Baker was
10 putting to you that it really is necessary to
11 understand how alleged Wetlands 2 to 7 should be
12 understood and why isn't there any soil data, and
13 you--you said, well, there should be more soil data,
14 there should be more soil observations, but there
15 isn't much that's available.

16 A. I don't think I said that. I don't believe
17 that was my statement.

18 Q. Okay. Would you accept that? Dr. Baillie has
19 provided soil observations from across the site, and I
20 would refer you, if you need to be referred, to Figure
21 3 on Page 13 of his report, and, indeed, all through
22 his report, in which he sets out his analysis of soils

1 from across the site.

2 Would you accept that?

3 A. I'm familiar with what he did, and he--as I
4 told Mr. Baker, that I looked at what he was
5 reporting, and he's reporting hydric soil
6 characteristics.

7 Q. Right. And he's looked at the--he's gone
8 across the site. You accept that?

9 A. And he's reporting hydric soil
10 characteristics. They might not have fell into the
11 Classifications 7 or 8, according to INTA, but they
12 don't have to fit into those classifications to be
13 hydric soils.

14 Q. Thank you. And last question.

15 Do you really believe that a hydric soil can
16 be found with mottled coloring? Is that--did I
17 understand your evidence to Mr. Baker correctly?

18 A. That's just one of the characteristics of
19 hydric soils. Anaerobic conditions.

20 Q. So, it doesn't have to be predominantly
21 gleyed?

22 A. I wouldn't say that.

1 Q. Okay. Well, you're not a soil scientist, are
2 you?

3 A. No. But I know a fair amount about soils,
4 so--

5 MR. BURN: Thank you.

6 THE WITNESS: Thank you.

7 PRESIDENT SIQUEIROS: Thank you much,
8 Mr. Erwin.

9 THE WITNESS: You're welcome.

10 PRESIDENT SIQUEIROS: Why don't we take a
11 5-minute break. Is that okay? Thank you.

12 (Brief recess.)

13 PRESIDENT SIQUEIROS: If you're set to
14 continue? Okay.

15 JOHAN S. PERRET & B.K. SINGH,

16 RESPONDENT'S WITNESSES, CALLED

17 PRESIDENT SIQUEIROS: We're to continue with
18 the examination of Drs. Perret and Singh; and as you
19 have identified through past examinations, after
20 having been requested to confirm your statement on the
21 part of counsel to the Republic of Costa Rica, you
22 will be able to make a brief summary of your

1 presentation, and thereafter to be followed by
2 cross-examination on the part of counsel to Claimants.

3 If there are issues that your counsel might
4 wish to make a redirect, they may proceed to do so.

5 We would ask you to first listen to the
6 question and then proceed with the answer. If you
7 have any questions with respect to the question, feel
8 free to address this. And then if you wish any
9 clarification, you may do so later.

10 Considering that both of you have prepared a
11 Report, at the time of being cross-examined, counsel
12 to Claimants, which is the protocol that had been
13 established earlier, will request that one of you
14 continue with that line of questioning, although at
15 the end, the other may--the other one of you may wish
16 to make some additional comment in that respect.

17 So, in order for us to proceed, we would
18 request that you read the statement as to how you will
19 prepare--deliver your testimony this afternoon.

20 THE WITNESS: (Dr. Singh) I solemnly declare,
21 upon my honor and conscience, that my statement will
22 be in accordance with my sincere belief.

1 THE WITNESS: (Dr. Perret) I solemnly declare,
2 upon my honor and conscience, that my statement will
3 be in accordance with my sincere belief.

4 PRESIDENT SIQUEIROS: Okay. Thank you.

5 Since--we should be reminded that we have the
6 very generous assistance of Court Reporters and
7 Interpreters. At the time that you are to answer, I
8 would ask that you try to reach closer to the
9 microphone, because they already have a difficult job,
10 and this will make it easier for them.

11 Thank you.

12 MR. LEATHLEY: Thank you, Mr. President.

13 DIRECT EXAMINATION

14 BY MR. LEATHLEY:

15 Q. Good afternoon, gentlemen. I wonder if you
16 could just open up the binder in front of you and
17 identify your Joint Report, just to verify that is
18 your Report.

19 It's behind Tab 9, I think.

20 A. (Dr. Perret) That's correct. It is our
21 Report.

22 Q. Thank you.

1 And do you have any corrections or any
2 clarifications you would like to make, or are you
3 happy with it in its current state?

4 A. (Dr. Singh) No, we don't.

5 Q. Thank you, sir.

6 And I understand you're going to give a
7 presentation to summarize your findings and explain
8 your approach.

9 MR. LEATHLEY: At this point, Members of the
10 Tribunal, I'll hand over to Drs. Perret and Singh.

11 THE WITNESS: (Dr. Perret) Well, good
12 afternoon. My name is Johan Perret. I am a professor
13 at EARTH University at Costa Rica where I've been
14 working for the past ten years as a soil scientist,
15 and I--I've been working internationally in soil for
16 the past 16 years.

17 THE WITNESS: (Dr. Singh) My name is B.K.
18 Singh. I'm professor at EARTH University in
19 Costa Rica for last 26 years. I am in soils science
20 and I'm specialized in tropical soils.

21 THE WITNESS: (Dr. Perret) What we'd like to
22 do before sharing with you the findings of our

1 reports, we'd like to take the opportunity to respond
2 to one of the statement of Dr. Baillie.

3 And finishing his presentation, he declared
4 that soils scientists, which is Professor Cubero,
5 himself, and Green Roots, that is, Dr. B.K. Singh and
6 myself, were in agreement. And actually, we are not
7 in agreement.

8 So, we'd like to start--before going into the
9 findings, we'd like to clarify more than ten points of
10 divergence.

11 So, let me start with this slide that shows
12 basically a description of the divergence that our
13 methodology called in our results and in the
14 conclusions.

15 Let's start with the methodology. Now, one
16 thing that you may have realized is that depth is a
17 key parameter when you study soil. And you have
18 different tools to access soil at different depths.

19 Now, INTA, or Cubero, and Dr. Baillie used
20 soil augering. That's the main tool that he used.

21 In the case of Dr. Baillie, he used what we
22 call mini-pits, very shallow, where they're not going

1 any deeper than 60 centimeters in depth. Now, you
2 understand the kind of preoccupations that this may
3 imply if you don't go deep enough, especially when you
4 have suspicion that this is a field.

5 And in our case, according to the soil
6 taxonomy methodology, we went to 1.6 meters.
7 Actually, the soil taxonomy asks you, requests you to
8 have a description of what we call a pedon, that is
9 for a unit of soil. They recommend you to go to
10 200 centimeters if you can.

11 Now, if you have a water table, that's
12 unusually complex. That was the case. We add in that
13 soil pit that we open in Wetland Number 1 to use
14 buckets to empty the soil pit to get a good profile.

15 Now, we also use boreholes. Boreholes have
16 the advantage of going much deeper. Now, you see the
17 difference. Depth is critical. What we do criticize
18 is that the augering that was done by Mr. Cubero and
19 by Dr. Baillie was not deep enough.

20 That's our first point.

21 Second point: Number of observations.

22 Now, again, you want to describe reality.

1 That's our job as scientists. Dr. Baillie did a good
2 number of observations and we do not criticize his
3 approach on that side.

4 However, Mr. Cubero did only two borehole, two
5 augers. What you have to know when you use the auger
6 technique with an Edelman auger is that it's like a
7 core screwdriver. You will create artifacts. You're
8 mixing the--and this will affect your view of the
9 profile when you reconstruct the profile.

10 So, is it the ideal tool? Definitely not.
11 You need to have access to soil pit or to a cut in a
12 road, which Dr. Baillie did. But he did that outside
13 of the contentious area.

14 So, number of observations also can be
15 criticized as well as depth.

16 Now, measurements and sites. It is nowadays
17 very common to use all sort of techniques,
18 instruments, to get realtime in-situ measurements
19 of--I listed a few here--you know, pH, TDR, which
20 gives you humidity. Now, it's critical to have a view
21 of the humidity. Why? We are talking about hydric
22 soil. We know that water does recondition

1 pedogenesis.

2 We also use techniques such as hydrogen
3 peroxide, which was not mentioned in any of their
4 reports. Why? Because if you use these kind of
5 techniques, you can clearly advantage--show that you
6 have manganese. And manganese is one of the
7 indicators of hydric soils. And we didn't see any of
8 that in the reports.

9 Now, we need to complete this on-site
10 measurements with lab analysis. We heard this morning
11 from Dr. Baillie that it did not carry out soil
12 analysis. However, it did use an instrument, the land
13 capacity classification of Costa Rica, that has one of
14 the parameters that is fertility. Fertility needs to
15 be assessed with iron concentration.

16 Now, how do you do that if you don't have lab
17 analysis? I don't know.

18 So, in our case, varying upon it, we want to
19 have organic matter. Dr. Baillie mentioned that
20 organic matter is critical. So, where do you do that?
21 In the lab. You want to have quantitative assessment
22 of organic matter. Densities. Densities are

1 critical. Where do you assess that? You need to
2 drive a sample. You do not do that in field. In the
3 lab.

4 So, you see the importance of
5 completing--complementing your field observations with
6 lab analysis.

7 Fifth point. They did not use the USDA field
8 indicators for hydric soil. And this is one of the
9 extension of soil taxonomy. Dr. Baillie mentioned
10 that USDA soil taxonomy is the system that is official
11 in Costa Rica, and we are in agreement with that
12 point.

13 However, the field indicators for hydric soil
14 is part of the USDA methodology. If you go on and
15 find any documents of the USDA, it is there.
16 It's--it's an appendix. When you want to describe
17 soil, hydric soil, you refer to that. It's part of
18 the USDA approach. Did they use it? No.

19 Finally, Point 6 in the methodology, we
20 can--and this is obvious, is what we mentioned
21 earlier: There is a lack of information. It's not
22 complete. And this is our duty as scientists to be as

1 inclusive, as complete--we want to describe reality.
2 And if we are missing one of the parameters, then we
3 will not describe properly what is in front of our
4 eyes, or what we are measuring.

5 Precision is an issue. Rigor. Now, maybe
6 this is something that right away we would see when
7 you're a soil scientist, but positions were not tried.
8 It was surprising to us that--to see that in Cubero's
9 location, some of the--two points were done: One of
10 them was outside of the property. When you look at
11 the georeference point.

12 So, methodology, we do believe, was not done
13 to the standard that is required in that case.

14 Now, let's talk about the results. Results,
15 well, we mentioned that earlier on. We lack in these
16 two soil studies, Dr. Baillie's and Cubero's,
17 quantitative numbers that remove some of the
18 subjectivity that you may have in the field.

19 Quantitative results. That's why we use
20 instruments in the field. Of course, this implies
21 that you need to rely on some technology instruments
22 that you "bulk" (phonetic), and we give you a number.

1 Or you're relying on the lab.

2 Now, one thing that was very surprising to us
3 is that part of the methodology for soil taxonomy is
4 to reconstruct a soil profile. You want--you have a
5 nomenclature for that. You have "A horizon," "O
6 horizon." And we see that more--further, but where is
7 the soil reconstruction? Where is the profile? Where
8 is the photo?

9 Do we have--in some of the photos of the soil
10 pit, do we have any indication of depth or tape? No,
11 we are not talking about "iTech" (phonetic) here.
12 Just put a tape. That's rigor. That's what we teach
13 our students. Where is that? It's not there.

14 Did they recognize a buried native horizon?
15 No. And this is a key element for Wetland Number 1.
16 For that, you need to go deep enough. And that's what
17 we took, a lot of--we were careful about that. We
18 weren't--we didn't know at what depth we would find it
19 or if there was. But we went deep in order to have a
20 full view of what, again, we call the pedon.

21 Okay. Did they mention anything about the
22 indicators of hydric soil? In our case, we have clear

1 indicators of 5, of 13, of 2; no mention of that.

2 And finally, and this was wrote many times by
3 Dr. Baillie, they used the land-use capacity, or what
4 he refers to as the Costa Rican Land Evaluation.

5 Now, let me clarify here that this instrument
6 is not meant to establish if a soil is hydric. This
7 is not the instrument for it.

8 Okay. Conclusions. Let's take a look at the
9 differences. We--and you will see how we support that
10 with our findings. We are evidencing that there is
11 recent human-transported landfill, over 1 meter. And
12 it is recent, less than ten years.

13 Now, in terms of the--and that's something
14 that mentioned, Dr. Baillie. We do agree on the
15 endoaquept. Now, we do not agree on the subgroup, but
16 I would agree with you, Mr. Baker; let's not fuss
17 around--we can explain exactly what it means, but in
18 the end, this is a detail, especially when we do agree
19 on endoaquept. Let me explain.

20 Aquept--the "ept" means "inceptisol." That
21 means that it's a recent soil.

22 "Aque"--"aquept" means that it is soil under,

1 "aque cretions" (phonetic). What does it tell us?
2 Water table that is "I," saturated conditions. We all
3 agree with that. All the three soil scientists with
4 that.

5 And finally, "endo." And Dr. Baillie
6 clarified the difference between "endo" and "epi" in
7 his report, and he talked about it this morning.

8 Now, "endo" means that the water table is
9 coming from down below. These are the conditions that
10 you would find in a wetland. Water table coming down
11 below, not the way Dr. Baillie describes it. That is,
12 water infiltrating and infiltrating very slowly. Poor
13 drainage, no. It is water table and endo. And
14 interestingly, Dr. Baillie do mention that the soils
15 in Wetland 1 is endo. So, we do agree on that.

16 Now, we all agree that they are aquept
17 measure--moisture-regime. It's very important because
18 in the three terms--in the three key parameters to
19 define a wetland, you need to have moisture regime.
20 It's aquic, or hydric moisture regime. One of them is
21 there. We all agree on that it.

22 Then you need to have hydric soil. We have

1 disagreement on that, but we bring the evidence. Why?
2 It is an hydric soil. That's what we have in
3 Point 16. And finally, we want to emphasize, Point 17
4 here something very important. When you do classify
5 soil, you need to make the difference between what we
6 call mantle and native soil. Otherwise, you will not
7 describe well the reality.

8 Okay. Now, we clarified our disagreement.
9 Let's move on to the findings. Obviously, we already
10 covered some of these findings. But before that,
11 let's be clear on what we were asked to do.

12 Three tasks, very simple: Is there in Wetland
13 Number 1, we concentrated only on the area--Wetland
14 Number 1. Why? That's what we were asked to do. Is
15 there a fill, presence, or absence, and what is the
16 depth of the fill? That's Task Number 1.

17 Task number 1 [sic], is there or not hydric
18 soil in Wetland Number 1?

19 And finally, what is the class, you know, what
20 is the soil taxonomy class of the soil of Wetland
21 Number 1?

22 Okay. Findings, right away. Three tasks.

1 They are divided into these three tasks. Let's go
2 with Task Number 1. Presence and depths of fill.
3 Here is what we found. There is definitely a depth of
4 fill over 1 meter, and there's a soil that is buried
5 below.

6 The fill material has been brought by
7 machinery, and it is very recent, less than ten years.

8 Task Number 2, is there or not hydric soil in
9 Wetland 1? Soil exhibit all the redoximorphic
10 properties and we covered them in detail in our
11 reports. There is a buried soil down below, and this
12 soil is hydric, definitely.

13 And, as we will explain later on, if we have a
14 buried hydric soil, the whole profile is hydric by
15 definition.

16 Finally, Task Number 3, classification
17 according to soil taxonomy, we already mentioned that,
18 aquic moisture regime. There is no doubt about it,
19 and we are dealing with endoaquept with very poor
20 drainage.

21 Okay. Now, let me go over what is the
22 evidence behind Task Number 1. What we did, we did

1 six boreholes in locations that were indicated to us
2 by KECE in Wetland Number 1, and we reconstructed the
3 profiles.

4 And the profiles is what you can see on the
5 right side, right here. So, what we did, these are
6 cores. We went all the way to 4 meters, and then we
7 lay out the soil cores, and then we study. And we
8 reconstruct horizons. You can see that here these
9 horizons have the symbol A, which means superficial,
10 and the caret symbol, that means here that it is
11 human-moved. And here, we are dealing with a
12 different type of soil. You see A, still superficial;
13 and G--J--G, sorry, which means "gley," right? And B
14 for "buried."

15 Now, interestingly enough, here, you can see
16 that for borehole 3, 9, and 12, they all show the
17 same; that is, gray gley soil that contrasts
18 drastically with the upper soil that is the mantle.

19 Okay. And then in borehole--next to Borehole
20 Number 9, we open that--you can see the water level
21 down below and we can almost see's the bucket, but the
22 bucket's not very far because we had to empty it

1 regularly.

2 Okay. What is nature doing? Well,
3 nature--what we use, we use the term "pedogenesis."
4 That's a slow process. The beauty is that soil has a
5 memory. It will record for you. It will--keeping--if
6 we have--if we know what happened five years ago, ten
7 years ago, and we can see some of the things, but--

8 MR. BURN: Sorry to interrupt. I'm not going
9 to object to this addition, but just to note, the
10 image on the screen is not taken from the Report
11 prepared by Drs. Singh and Perret and is not in
12 evidence.

13 THE WITNESS: (Dr. Perret) That is correct.
14 And then this is actually general soil knowledge here.

15 Now, notice that on--at the surface you have O
16 horizon. O means organic matter. Sorry.

17 PRESIDENT SIQUEIROS: Do you have an objection
18 for him to continue with this--it seems to be pretty
19 straightforward, not analyzing the property itself.
20 But you are right; if it's not in the materials, then
21 they should not be examined.

22 MR. BURN: I mean--no, it's a--Dr. Perret is

1 setting out his understanding of the relevant
2 methodology which, of course, is sufficiently set out
3 in their Report.

4 So, I don't object in that sense, but it seems
5 that we have another Expert who's not been properly
6 instructed as to how to prepare the demonstratives
7 that are being prepared and presented here. I put
8 down a marker in case it becomes an issue later on.
9 No more than that.

10 PRESIDENT SIQUEIROS: Okay. Dr. Perret, the
11 objectives as you have probably identified from prior
12 examinations, is demonstrative material has to be used
13 only if they have been previously submitted to the
14 record of this Arbitration.

15 So, if this has not, which apparently it has
16 not, when we continue with the rest--

17 THE WITNESS: (Dr. Perret) Yep. Understood.

18 PRESIDENT SIQUEIROS: Thank you.

19 THE WITNESS: (Dr. Perret) The only point
20 here, natural soil will have O horizon, organic matter
21 at the surface. That's what nature does.

22 Now, here is the soil profile in Soil Pit

1 Number 9. What do you see? At a depth of
2 105 centimeters, you see that 0 horizon. You see it
3 here. Nature does not do that. You can see it here
4 on the right. You see that's a thick mat. You're
5 talking about here 4 centimeters. Again, this is not
6 the work of nature.

7 Interestingly, also, it doesn't show very well
8 on the projection here, but you can see some gray line
9 here. You see?

10 And these gray lines show us--you reduction.
11 Reduction, that's when Dr. Baillie explained it. You
12 know, it's going to--you have your iron that we change
13 and will change in color. And now that tells us
14 something.

15 It creates discontinuities. And these
16 discontinuities--again, soil has memory--shows us that
17 the filling event was broken down into three filling
18 events at different times. And this is due to the
19 reduction in the profile.

20 Okay. Let me move on to that organic matter
21 layer. Now, first thing that we'd like to point out
22 is that it was not an isolated observation. In the

1 soil pit throughout, all around, remember, the soil
2 pit is 2 meters by 1 meter, fairly significant. That
3 maintains, so, it's not organic matter that was at one
4 point. We observed it also in the course--or the
5 boreholes that we took. The transition between the
6 mantle or the fill and the gley soil down below.

7 Now, let's focus on that organic matter. It
8 is what we know as fibric. Fibric organic matter
9 means that it is at early stage of decomposition. How
10 do we know that? Because we can see leafs. We can
11 see leafy material. And you see this organic matter
12 is like a time clock that is ticking. It is telling
13 us less than ten years.

14 We can also quantitatively look at this number
15 here. You see, "materia orgánica," the percentage of
16 organic matter. You're close to 45 percent. What
17 does it tell us? Fresh. Fresh organic matter.

18 So, here it's a time indicator for the buried
19 native soil.

20 Now, if we look at properties such as organic
21 matter throughout the profile, that's what you have
22 right here. That's the depth, vertically. You have

1 the percentage horizontally, and look at the
2 discontinuity here. We arrive at 105--or
3 109 centimeters, and it jumps here.

4 Nature does that. See? Gradual gradient.
5 Nature does not put organic matter like that. This is
6 not the work of nature.

7 We have the same observation when we come to
8 bulk density. Bulk density increased with step. This
9 is--every textbook on soil pedogenesis will tell you
10 that. Here, look at what we have. But decrease in
11 bulk density. This is, again, not the work of nature.

12 Same goes with porosity. Porosity decreases,
13 and it makes sense. Less biological activity in
14 deeper Zones, and therefore, less porosity. Here,
15 it's obvious. Look at that. Porosity increases with
16 depth. Not the work of nature.

17 So, we have a mantle and we have a buried
18 horizon--buried soil--buried gley.

19 Okay. So, here is the conclusions for--or
20 findings for Task Number 1. I repeat: Depth of fill
21 over 1 meter, no doubt about it. If a buried soil
22 lies below, no doubt about it. And the fill material

1 has been moved recently, less than ten years with the
2 aid of machinery.

3 Now, at that stage, I would like my colleague,
4 Dr. Singh, to carry on with the presentation.

5 THE WITNESS: (Dr. Singh) Thank you,
6 Dr. Perret.

7 Let's go to the next slide, please.

8 First we know that there is a buried soil that
9 is a fill material 1 meter deep, and that has
10 been--clearly, that has been demonstrated. So, in
11 order to look at indicators to find out hydric soil,
12 what we need to do, Number 1, we have to find where
13 the native soil surface is. Without that, we can't do
14 that, because the definition talks about native soil
15 surface.

16 So, in that case, let's look at the picture on
17 the left. The picture on the left, if you see,
18 that--it will be all horizon, where the organic matter
19 begins, because it can't be--it's just like us. The
20 head cannot be down. Our head has to be up. The soil
21 head has to be up, and that's organic matter. So
22 that's where the depth begins. That's where the

1 natural soil begins.

2 So, that's 0 or "Oi horizon."

3 You're going to take that as the native soil
4 surface, and our analysis are looking for the hydric
5 soil will begin from there, from that depth, not the
6 material that was brought in, not the material that
7 was recently brought in. That's the fill. That is
8 transported material. That's not natural.

9 If you look at the Borehole Number 9 in the
10 red box, you're going to see, again, not on the top,
11 at the bottom. So that's our starting point for the
12 classification. And that's what field indicators of
13 hydric soil tells us to do that, find the native
14 surface and classify the soil, where the hydric soil
15 is or not.

16 So, this slide is a little bit crowded. But
17 we will get lots of information and very interesting
18 ones. First, in the column profile, we have Pit
19 Number 9, and then Bore 9 to Bore 12.

20 Look at the depth. We are from 04 centimeter.
21 We put the maximum depth of 46; and then if the plus
22 sign appears, you can see that we went lot deeper.

1 But for the classification purpose, more than a 46
2 upper surface that Baillie was talking about. What he
3 missed was he looked--he was looking into the
4 transported material, not at the native soil, which
5 was underneath. And we could only figure it out,
6 because we went deeper using the proper methodology.
7 We had to go 2 meters deep. And then all of a sudden,
8 we see, what is this? Organic layer? How come this
9 is here? So, we went deeper and deeper to figure it
10 out how far the native soil went, how far the native
11 horizon went.

12 So, when we put the plus sign, it means it's
13 still deeper.

14 You look at the redoximorphic conditions. So,
15 in order--hydric soil. In order for the--clearly,
16 hydric soil, you need redoximorphic features. And,
17 again, redoximorphic features, when you go to gley,
18 that's the last state in the hydromorphism process.
19 So, gley is the last. I mean, if you find gley, okay,
20 it's dead. And that's--you don't need any diagnostics
21 to make sure that--whether the person is alive or not
22 because it's already gley. And if you can prove that

1 it's endo, which is coming from underneath, that's it.
2 The case closed.

3 So, we were looking for, okay, how
4 far--how--could you please go back?

5 How far that gley layer went. It was
6 superficial, Dr. Baillie was telling us, because the
7 water was coming from up. It was restricted. And
8 that's why it was not going down. So, when he was
9 going down, he was finding gley soil. But the problem
10 is he was finding gley soil underneath because there
11 was a restrictive layer, so the water from the
12 top--there again, top in the transported material.

13 He--it wasn't staying up, so, he never went
14 down, and we--and he said, okay, this is--this is
15 basically aeric. It means water is coming from the
16 up--that's what's--another difference. But in this
17 case, you can see--look at the soil hydric indicators.

18 There are many indicators, and not all of them
19 require that soil has to have gley; not hydromorphic
20 characteristics, models, concentrations, redox
21 concentrations, "déplaçant." That's what you need.
22 And, of course, you need gley to see that, oh, man,

1 this is 100 percent, 100, 100, 100 percent there and
2 it has been for quite some time, not just five years
3 or six years. Maybe 10, 50, 20, 100, 200, 500 years.

4 So, if you look at those, all the profile, and
5 then you look at soil hydric indicators, all of them
6 meet the criteria for indicators. You just need one
7 to say that it's 100 percent hydric soil.

8 And if you look at the matrix color, gley,
9 gley, gley, gley, gley, gley. Of course, if you look
10 from the mantle, you'll never see it. But if you go
11 to the real surface, which this methodology requires,
12 you will see the hydric soil.

13 Let's see--and I would like to read this
14 aloud, because--the USDA definition, which all of us
15 are using, and I am going to read what is in the bold:
16 "Soils in which the hydrology has been artificially
17 modified are hydric if the soil, in an unaltered
18 state, was hydric."

19 Without any doubt, the soil--natural soil,
20 unaltered state was hydric, and we have seen that from
21 all the indicators.

22 Let's see--there is also--the whole process of

1 hydromorphism, and Dr. Baillie was talking about
2 hydromorphic soil and hydric soil. They're different.
3 No, no, hydromorphism is the process that creates
4 hydric soil.

5 And, again, hydric soil, the last state of
6 that process, you will find gley, and lots of gley.
7 But, again, in the initial state, there already
8 hydromorphic soil.

9 So, if you look in this slide, basically, what
10 we are saying, the hydromorphic soils and hydric
11 soils, they're the same. And in that case,
12 Dr. Baillie is talking about that, that he found
13 hydromorphic soils. That's great. But we are saying
14 that hydric soil, on the site, in natural state, all
15 of them have evolved over many, many years to hydric
16 soil by definition because all of them have gley.

17 This is the term--that is the reference,
18 technical criteria for identification, classification
19 and conservation of wetlands. And it talks about
20 wetland soil, which is hydric soil or hydromorphic
21 soil. So, it's basically--basically the synonym being
22 used.

1 And it's being used intentionally, and the
2 reason is, if you find even a slight sign that the
3 hydromorphic process has begun, that is a "prepantic"
4 (phonetic). You take it for granted that it will go
5 into hydric soil.

6 So, hydromorphic characters in its early stage
7 is considered--in that MINAE document is already
8 hydromorphic soil.

9 Let's go to soil taxonomy. And Dr. Perret has
10 talked about that in his--in the first slide. We
11 all--Cubero, Dr. Baillie, us, we agree--again, using
12 soil taxonomy classification, that inceptisol, it's a
13 young soil. It's under the process of development.

14 But, again, I would like--I would like to make
15 it clear, while using soil taxonomy, if the mantle, if
16 the fill material is more than 50 centimeter, we have
17 to use in the classification system from the top. If
18 it's buried soil. That's the requirement, and it is
19 well defined in the taxonomy book.

20 If you find a mantle that's less than
21 50 centimeter, then you take the buried soil, just the
22 horizon. But if it's more than 1 meter--more than

1 50 centimeters, then you take it, because you are
2 considering that is the whole soil.

3 So, you identify, you classify the whole
4 thing. So, if we take that into account, even in that
5 case, when we open the pits, when we auger--we have
6 our holes, boreholes, the aquic moisture regime, which
7 is in the controlled section of altered soil, the
8 water table was going up to 45 centimeters. And that
9 says, this is aquic moisture regime. We're finding
10 hydromorphic characteristics in the initial state,
11 even in the fill material.

12 So, if we really press it from the bottom, for
13 the water to go up. You are putting material, and
14 it's still trying to go up, so, the hydromorphism
15 characteristics, highly variable in A-1 in the last up
16 here one, but definitely in A-2, A-3, and then we go
17 to the natural soil of a certain gley, up to a depth
18 of 3 to 4 meters.

19 Superficial water can't do that. There is no
20 way superficial water will do that. It's underneath,
21 the water is coming--making it gley up to 3 to 4
22 meters. And it's not in one year, five year, ten

1 years. It's a long, long, long ago.

2 So, we agree that inceptisol with aquic
3 moisture regime; and one of the criteria for defining
4 wetland is to find aquic moisture regime. Because
5 once you have aquic moisture, that's the condition
6 required for the development of hydromorphic
7 properties. That's the requirement for the
8 development.

9 So, if that is not there, maybe you will not
10 find it. All of us agree that, yes, there is aquic.
11 And if you go to bottom, native, the water table is
12 right on the top. Nobody has to do even any analysis
13 to find that out.

14 Then all of us agree, Baillie--Dr. Baillie,
15 Cubero, and Green Root--it's endoaquept, which
16 is--it's basically the water is coming from down.
17 It's a ground--ground-level water. It's not coming
18 from the top.

19 What--what that makes us to believe with
20 certainty that the soil, even it's altered, an altered
21 state, is an inceptisol with endoaquept, and that's
22 more than enough, even with--we don't have to go to

1 what is a fluvaquentic, aquentic, or aeranic
2 (phonetic) or aeric. There are so many definitions.
3 Dr. Baillie has like seven or eight of them.
4 Dr. Cubero had one, which is pretty much what we have,
5 fluvaquentic endoaquept. Because there is--aquentic
6 means there is no barrier, natural barrier, for the
7 movement of water.

8 There is no natural barrier. So, that means
9 the drainage water couldn't have stayed up. Maybe
10 temporarily, but it goes down. And you can see that
11 the--that with the porosity data, that this was the
12 pores, even on the top. It's lots of pores.
13 Micropores. So, that those are good for infiltration.

14 So, definitely, the soil taxonomy
15 classification confirms that there's a very, very good
16 chance, and then it says, with the gley color, with
17 the Munson table and all the determination of
18 hydromorphic characteristic, definitely. There is
19 hydric soil.

20 So, basically, these are our findings, and we
21 have talked about it. There is a mantle--there is a
22 fill material, at least 1 meter deep; hydric soils are

1 on the site, definitely, 100 percent. Soil taxonomy,
2 which everybody has used, also indicates that there is
3 hydric soil.

4 We shouldn't forget that if there's a
5 buried--buried hydric soil, all soil classifies as a
6 hydric.

7 Thank you.

8 MR. LEATHLEY: Thank you, sir.

9 PRESIDENT SIQUEIROS: Thank you.

10 Mr. Burn?

11 MR. BURN: Thank you very much.

12 CROSS-EXAMINATION

13 BY MR. BURN:

14 Q. Drs. Perret and Singh, now, can you just look
15 at Slide 14 from the pack that you've just--you won't
16 find it in there. Your team handed it out. I don't
17 know if there's a spare copy available. So, this is
18 the slide headed "Presence of Hydric Soils." I just
19 want to clarify something that Dr. Singh said. So, if
20 you can turn to Slide 14.

21 Now, Dr. Singh, you indicated that there was a
22 definition that refers to native soil surface. That's

1 a term that you--that featured on--the microphone is
2 on, don't worry--that featured several times in your
3 presentation.

4 Where do you get that definition, "native soil
5 surface," from?

6 A. (Dr. Singh) Native soil surface is directly--

7 Q. Where is the definition?

8 A. (Dr. Singh) In the indicators.

9 Q. Where in the indicators? I mean, you're--if
10 it's such an important matter, you'll be able to point
11 me straight away to the precise place in which I'll
12 find the phrase "native soil surface."

13 A. (Dr. Singh) Okay. Dr. Perret just explained
14 in the soil science, what is soil profiling--

15 Q. Sorry to cut you off. It's a very specific
16 question: Where will I find the definition that you
17 said exists, "native soil surface"? You said, not
18 Dr. Perret, you said, it's part of the definition.
19 Which definition were you speaking of?

20 A. (Dr. Singh) it--it's very common. It's like a
21 basic thing, to know that zero horizons, organic
22 matter horizon is on the top.

1 Q. Right.

2 A. (Dr. Singh) And that's the native--

3 Q. I apologize for cutting you off. But it was a
4 very simple questions I have put to you three times
5 and you've failed to answer it.

6 If you look at Slide 14 and the text that you
7 read out, the enboldened text, is it--is it your
8 position that these are more or less the same thing,
9 your concept of native soil surface and soils in--in
10 the reference that we see in the bold text on
11 Slide 14, is that essentially the same thing, are we
12 to understand?

13 Slide 14, 14, 1-4, bottom right-hand corner.

14 A. (Dr. Singh) I think we are looking at
15 different--

16 Q. Okay. Well, it seems your pack has changed.

17 MR. BURN: So, it's this page, Members of the
18 Tribunal, that I'm holding up. That's what I've got.
19 I don't know what's on the screen; not the version of
20 the presentation.

21 MR. LEATHLEY: Mr. Burn, you were handed with
22 your hard-copy presentation a printout because we

1 didn't have time to print out a full set of the
2 slides. So, Slide 15 is--has been--what appears on
3 the screen, incorporated in the printout as its slide.

4 MR. BURN: Thank you.

5 BY MR. BURN:

6 Q. So, this should be Slide 15 that
7 we're--anyway. Whatever. It's the slide that's
8 headed "Presence of Hydric Soils."

9 Do you see that? So, when you--when you
10 introduced the concept of "native surface soil," are
11 you speaking in the same territory when you refer to
12 this definition in the USDA of soils in which
13 hydrology has been artificially modified or hydric if
14 the soil in unaltered states was hydric? Is that more
15 or less the same thing to which you refer?

16 A. (Dr. Singh) Yes, it is.

17 Q. So, although you can't point to a definition
18 for this very important concept that you referred to
19 multiple times, this is roughly what we should have in
20 mind.

21 Now, can you take, in the loose papers in
22 front of you, not--it's not in the file, there's a

1 document or--a long document, which you'll be very
2 familiar with, at C-309. This is the keys to soil
3 taxonomy at the United States Department of
4 Agriculture.

5 If you could turn to Page 176. Now, this is
6 slightly strangely arranged in terms of how things
7 appear on the page, which is why I've gone to 176, the
8 point being that the heading and inverted commas is at
9 the bottom of the relevant section. But you'll see
10 right at the top of 176, the phrase--and I apologize
11 to the transcribers--"fluvaquentic endoaquept," yes?

12 A. (Dr. Singh) Yeah.

13 Q. And the definition of that starts over the
14 page on page 175.

15 A. (Dr. Singh) That's correct.

16 Q. Thank you.

17 Now, what it says in the introductory wording
18 there is, these are other endoaquepts that have all,
19 in italics, of the following, and then it enumerates
20 three criteria. The middle one there reads, "A total
21 thickness of less than 50 centimeters of
22 human-transported material in the surface horizons."

1 Now, just as a matter of terminology, "human
2 transported material," "mantle," "fill," these are all
3 the same thing, aren't they? Yes or no?

4 A. (Dr. Singh) The mantle can be made out of
5 human-transported material.

6 Q. Right. But when it refers to
7 human-transported material here, it's talking about
8 what in the--in the context that you've done on the
9 Las Olas site, is the same as fill; yes?

10 A. (Dr. Singh) That's correct.

11 Q. Right. So what we're saying here in
12 "fluvaquentic endoaquepts," apologies again,
13 need--which is your definition of this soil, your
14 classification of this soil, can only have up to
15 50 centimeters of human-transported material or fill;
16 right?

17 A. That's correct.

18 Q. And then what you would say, and I anticipate
19 this for you--is you would go back to Slide 15, 14,
20 the "Presence of Hydric Soils," and you would say, ah,
21 but it's okay; I can still get down below
22 50 centimeters to my gleyed soil, because I can

1 classify the material as having been artificially
2 modified; right?

3 A. (Dr. Singh) Yes, sir, but I would like to
4 clarify this.

5 Q. Well, because--no, no, no--I really
6 don't--none of us has much time. I'm sure
7 Mr. Leathley will enable you to clarify, if necessary.

8 But we--you've confirmed that in order to get
9 below, within the definition that you adopt for this
10 soil, 50 centimeters, you have to find that the
11 material is artificially modified.

12 Now, fluvaquentic endoaquepts, these are, I
13 think as Dr. Perret very eloquently described, these
14 are soils that have been deposited by rivers; correct,
15 by river flows?

16 A. But in that--

17 Q. Yes or no.

18 A. Yes.

19 Q. Now, material that is deposited by river flows
20 is sedimentary in character? Would you accept that?

21 A. Yes.

22 Q. And by being deposited over time in a

1 sedimentary fashion, it's not going to be even, is it?
2 It's going to happen at different rates with different
3 materials, sometimes organic material, sometimes silt.
4 There will be different things that are happening at
5 different points in the process of the soil building
6 up over time; right?

7 A. Yes.

8 Q. Right. So, you would not expect to see a
9 continuum in the soil profile of fluvaquentic
10 endoaquept; right?

11 A. Right, but--

12 Q. No. Again, you'll have--

13 MR. LEATHLEY: I'm sorry. I--

14 PRESIDENT SIQUEIROS: I think that this--

15 MR. LEATHLEY: --have sympathy for Mr. Burn,
16 but I think we've crossed the line here, sir.

17 PRESIDENT SIQUEIROS: Yes, I think--

18 MR. BURN: Well, I mean, it--I can finish very
19 quickly with this point, and then he can--all right.

20 BY MR. BURN:

21 Q. But the point here is--the point here is that
22 you've accepted that it happens in an uneven fashion

1 over time because of the nature of river deposition of
2 material. That means that there will be
3 discontinuities naturally, doesn't it?

4 A. (Dr. Singh) You are talking about--

5 Q. Sorry--

6 A. (Dr. Singh) You are talking about different
7 things. "Fluv" and "fluv aqua" are different things.
8 It's a transported material, definitely is a
9 transported material.

10 Q. Uh-huh.

11 A. (Dr. Singh) But again, "fluv aqua" means the
12 profile at this level does not have a hard layer.
13 That's what the difference--and if you read it well,
14 that's what you're going to find. It's not talking
15 about river-transported material at this level. It is
16 talking about there is no hard pan. So, water has to
17 flow. It's--

18 Q. The point is, the way that this soil builds up
19 over time, the sedimentary deposition of material, is
20 going to be uneven, so, you would expect to see
21 layers. You would expect to see discontinuities. You
22 would expect to see horizons. You would expect to see

1 some things happening -- some organic material
2 happening at this point in time, some silt materials
3 at another point in time. It's part of what these
4 types of soil are constituted by.

5 A. (Dr. Perret) Mr. Burn, if I may. Organic
6 matter floats. So, what you're saying is actually
7 correct in terms of silt material and sand materials.
8 But organic matter will not be deposited below soil.
9 That's--that's, I guess, Archimedes would have come to
10 the same conclusions. Organic matter is less dense
11 than water; therefore, it will never accumulate below
12 soil unless it has been buried.

13 Q. Now, in order to find the type of artificial
14 modification of soil on which your entire finding of
15 hydric soils rests--because as we've seen, the
16 definition of "fluvaquentic endoaquepts" requires you
17 to stop at the 50-centimeter point. Your entire
18 analysis depends on there being evidence of artificial
19 modification; right?

20 A. (Dr. Singh) That's not correct. What you are
21 referring to, the reference, is not correct at all.

22 Q. Uh-huh. Please explain.

1 A. What you are describing--exactly.

2 That's 2014 person of soil taxonomy we're
3 talking about. What Dr. Cubero used was 2010, which
4 is similar to 2012. That's what we used.

5 So, you subject--you subject into that
6 criteria of depth filling is not in 2012. You should
7 go back and read that, and that's specifically we have
8 mentioned that that does not appear. That's only in
9 2014, and we wanted to be pretty consistent with what
10 INTA had done, so, we've used the same key to soil
11 taxonomy. And at that time, 2012 when the studies
12 were done, this--they didn't consult this person,
13 that's what you are talking about.

14 We do understand what makes that belief,
15 Dr. Baillie and you, that there was transported
16 material, because that's Dr. Baillie's classification.
17 It means he's admitting that there are
18 50 centimeters--whatever you said, everything that
19 Baillie had to say. Because that what he put in his
20 Report, 2014. It doesn't exist in 2012. It doesn't
21 exist in 2010. Please review.

22 Q. Now, could you turn to Appendix 2 to your

1 Report. This is headed "A Note on Land Use
2 Classification."

3 A. (Dr. Singh) Please.

4 Q. Now, this is really and truly speaking the
5 heart your findings, isn't it, Appendix 2? Because
6 what we see here--let me put it to you--

7 A. (Dr. Singh) Yes.

8 Q. --is--and to the layperson, this does look a
9 little obscure, I have to confess. But what we see is
10 your description in the large font, scientific
11 description, classification, of the soil.

12 And the relevant points, for the Members of
13 the Tribunal, are really found in the first character
14 there, Roman V. So, your starting point in terms of
15 classification--I'll allow you to move on to
16 your--your subsequent point on this, because I know
17 that's very dear to your hearts--is that this is, at
18 first glance, classified soil; right?

19 A. (Dr. Singh) If--yes.

20 Q. At first glance.

21 A. (Dr. Singh) Yes.

22 Q. Because--and that's because you are

1 looking--you're not going further down in the soil,
2 you're not discounting all of that mantle or fill or
3 human-transported material we were--we were speaking
4 of; you're just looking at the soil in the same way
5 that Dr. Cubero looked at it and the same way that
6 Dr. Baillie looked at it; right? And you all find
7 Class V.

8 A. (Dr. Singh) That's correct.

9 Q. And then what we see underneath that rather
10 obscure lettering in the middle of the page, is really
11 what your Report is about. Because what we see here
12 is, "If the mantle is not considered for the
13 classification, the land use capacity shifts to
14 Class VII due to soil effective depth of less than
15 30 centimeters."

16 So, in layperson's terms, because I'm just a
17 lawyer, and therefore, not a scientist, much to my
18 wife's chagrin, we have to have reason to look deep,
19 as you say, in order to get to Class VII, and a gleyed
20 soil; right?

21 A. (Dr. Singh) That's not correct at all.

22 Q. Okay. Please explain.

1 A. (Dr. Singh) Number 1--soil taxonomy, first, is
2 the basis. And Dr. Baillie and Dr. Cubero, they did
3 the soil taxonomy first. If you look at their
4 classification, that's what we were kind of pointing
5 on that. That did the soil taxonomy classification,
6 and that's the official classification to classify the
7 soil in Costa Rica.

8 If they would have done that right, take the
9 pedon; and soil taxonomy talks about it, that the
10 pedon size must be up to 10 square meter. It could be
11 less; but, again, within 10 square meter, 1 to 10, so,
12 we accept in general term 1 meter by 2 meter up to a
13 depth of 2 meter. If they would have done that, they
14 would have purely doubt--they would have found out the
15 native soil surface, which is organic horizon, which
16 was, oh, God, we are in something--

17 Q. Dr. Singh--

18 A. (Dr. Singh) --totally different.

19 Q. --sorry to interrupt. But there isn't, on
20 that point, in terms of the finding of gleyed
21 material, deep down, there's no difference.

22 Dr. Baillie accepts that it's gleyed material deep

1 down. Dr. Cubero might have done if he'd looked at
2 it.

3 But there's a reason, isn't there, that they
4 weren't looking more than 80 centimeters,
5 90 centimeters below the surface. And that's because
6 the whole classification of soil for hydric purposes
7 depends upon the gleyed material being, as we can see
8 here, within 50 centimeters, some definitions talk of
9 30 centimeters, some speak of 15 centimeters. That's
10 the U.S. field indicators.

11 All of those speak of some--gleyed material
12 that is close to the surface. That's the whole point
13 of looking for hydric material. It's not an exercise
14 in digging down until you find gleyed material; it's a
15 process of looking objectively at the soil within the
16 parameters that are defined, and accepting that if
17 there is, in this case, more than 50 centimeters
18 of--of human-transported material, then it--the gleyed
19 material is not relevant for the purposes of
20 understanding it as a hydric soil; do you accept that?

21 A. (Dr. Singh) No, sir. No, sir.

22 Reason Number 1, hydromorphism, as I explained

1 that earlier--hydromorphism is the process. Gleyed is
2 the ultimate estate.

3 If we--I find mottles, reduction, different
4 color in gley, some spotted gleys, it's already a
5 hydric soil.

6 Q. Okay. I think I have two questions--further
7 questions for you. Is the--do you have any evidence
8 of an earth movement done by the Investors or within
9 the last ten year of the scale that would be required
10 to take away a meter of material in Wetland 1? And if
11 you do have evidence of it, what is that evidence?

12 A. (Dr. Singh) Want to take it?

13 A. (Dr. Perret) Go ahead.

14 A. (Dr. Singh) Any of us can do that.

15 First, evidence. Is that--how that material
16 came there. How? That's the mystery. Okay. Let's
17 try to solve it. Number one, it was not that windy.
18 And, generally, we don't get wind erosion here that we
19 deposit 1 meter. We looked at the volcanic eruption.
20 Nothing happened in these years to bring--and that
21 would be silt. That's going to be different.

22 There was no plotting of that magnitude.

1 There was no landslide. There was nothing. I don't
2 know.

3 Q. Did you go--

4 A. I think it's very clear how that material
5 came. And so uniform. Very loose. Tree activities.
6 Definitely it was my--

7 Q. Did you--did you do anything equivalent to
8 Dr. Baillie's Observation 14 and look adjacent to the
9 site in order to satisfy yourselves that the material
10 was different? Because it would have to be different,
11 wouldn't it, if we're talking about artificial
12 movements?

13 You would have to be able to say "Adjacent to
14 the site I observed or we observed that there was
15 something different happening."

16 Did you do that?

17 A. (Dr. Perret) We did not look outside of
18 Wetland 1. However, if you look at Dr. Baillie's
19 report, you have in Figure 3, page--I'm going to say
20 17, around 17. You have blue dots, right? These blue
21 points that are located in Wetland Number 2, Wetland
22 Number 3, Wetland--what you are referring to, I guess,

1 in the presentation of KECE.

2 Now, all of these points, right, adjacent to
3 Wetland Number 1, all of these points look at the
4 legend that Dr. Baillie is putting. It's interesting.

5 You will see that they are hydric soils. We
6 are not saying it because that was not our task. We
7 were not asked to look outside of Wetland Number 1.
8 But if you look into Wetland Number 2, Wetland Number
9 3, so on and so, forth, Dr. Baillie did it, and puts
10 it--look at the legend--as hydric soil.

11 Q. Right. So, the simple answer to my question
12 is, no, you did not go to any adjacent site--

13 A. (Dr. Perret) Yeah. Yeah.

14 Q. Let me finish. No, you do did not go to any
15 adjacent site in order to find comparator profiles
16 that would corroborate your view that there was
17 artificial movement of soil of the scale that you
18 imply by discounting this volume of material, did you?

19 A. (Dr. Perret) We did not.

20 Q. All right. Thank you.

21 Now, last issue--I did tell you there were
22 only going to be two questions, and I've asked you two

1 questions. But this genuinely is the last issue.

2 Dr. Cubero still works at INTA, doesn't he?

3 A. (Dr. Singh) I know him well, so I will answer
4 this question.

5 Q. Right.

6 A. (Dr. Singh) Yes.

7 Q. Yes, he does. And INTA is the agency--the
8 Costa Rican government agency responsible for soil
9 classification in Costa Rica; correct?

10 A. (Dr. Singh) That's definitely, yes.

11 Q. Right. He's an expert in the field, isn't he?

12 A. (Dr. Singh) Yes, we work together.

13 Q. And he's a highly respected expert?

14 A. (Dr. Singh) I'll dispute that but not now.

15 Q. He's an authority in Costa Rica in respect to
16 the classification of soils. Bearing in mind you're
17 going to see him--

18 A. (Dr. Singh) He's one of us.

19 Q. --next week for a drink?

20 A. (Dr. Singh) He's one of us.

21 Q. So, bearing in mind you've got to stand up to
22 him and explain why you undermined him, you would

1 accept, wouldn't you, that he is a leading expert in
2 the field for the classification of soils in Costa
3 Rica; correct?

4 A. (Dr. Singh) Land use classification, not the
5 taxonomic.

6 Q. Right. But he, nonetheless, understands the
7 system. And when he at the time corroborated that
8 there was no evidence of hydric soil, you had no
9 reason to suppose that that is anything other than an
10 accurate authoritative assessment as of 2011; right?

11 A. (Dr. Singh) No, it's wrong.

12 Q. So, he's--

13 A. (Dr. Singh) I--I would like to say one thing
14 and which might sound like very dramatic. I believe
15 in God, but I need data. I need numbers. I need
16 science. It doesn't matter if he's my friend or who.
17 I studied with Cubero in the Soviet Union for six
18 years. We worked on that classification system
19 together. And we know what are the limitations of the
20 system. We need the data. And Dr. Cubero in this
21 case--and I'm going to really go back and tell him, if
22 I'm allowed, that, "Man, now you have lots of new

1 evidence that we are giving you. As a scientist--as a
2 scientist, what's going to be your opinion?"

3 Q. But the Respondent, despite the fact that it
4 employs Dr. Cubero today, has failed to bring
5 Dr. Cubero to this arbitration. Does that strike you
6 as odd?

7 A. (Dr. Singh) Again, that's not up to me what
8 happened.

9 MR. BURN: Right. No further questions, sir.

10 PRESIDENT SIQUEIROS: Mr. Leathley?

11 MR. LEATHLEY: Thank you, sir. Can I just
12 consult for one minute, please.

13 PRESIDENT SIQUEIROS: Surely.

14 (Pause.)

15 MR. LEATHLEY: Just a couple of questions if I
16 may, sir. I'm conscious of the time.

17 REDIRECT EXAMINATION

18 BY MR. LEATHLEY:

19 Q. Gentlemen, if I can just follow up. There
20 were a few moments where you were cut off.

21 So, could I invite you, if you can recall,
22 the--the native soil horizon point was being put to

1 you by Mr. Burn. And I wonder if you could maybe just
2 clarify or expand on your answers that you were
3 providing.

4 Obviously, bearing in mind how this principle
5 that you have relied on could have a bearing on the
6 Tribunal's need to weigh the evidence before them?

7 A. (Dr. Perret) Okay. Maybe I'll say--I'll make
8 an analogy, Mr. Burn. Do you know what a natural tree
9 is? For us--

10 Q. I'm afraid none of us will be able to answer
11 any of your questions, sir. You'll be met by nothing
12 but silence. But we will accept your hypothetical.
13 Thank you.

14 A. (Dr. Perret) Sure. Sure. But what I meant to
15 say here is that for us, obviously, soil is obscure.
16 You know, you don't see through soil. You have to
17 poke. You have to measure. You have to--but
18 soil--natural soil has obvious characteristics such as
19 a tree.

20 You would make a difference between a plastic
21 tree and a tree because we know trees, we know how to
22 approximate. We touch, we cut, we burn. Same goes

1 with soil. A natural soil does not need a definition,
2 although I'm not excluding the fact that we would find
3 a definition for it.

4 But it is obvious when you have organic layers
5 such as the one in Wetland Number 1 that you are
6 dealing with natural or native horizon down below.
7 No--no question about it.

8 MR. LEATHLEY: Nothing further from us, sir.
9 Thank you.

10 PRESIDENT SIQUEIROS: Mr. Nikken? No.
11 Mr. Baker.

12 QUESTIONS FROM THE TRIBUNAL

13 ARBITRATOR BAKER: Just one or two, Chairman.

14 So, knowing that soil has natural
15 characteristics and that a picture is worth a thousand
16 words, why didn't we get a bore hole for each of the
17 other wetlands or alleged wetland sites?

18 THE WITNESS: (Dr. Perret) That's a good
19 question, and I think that you asked it to KECE
20 earlier on. And the answer to that, Green Roots was
21 not asked to look outside of Wetland Number 1.

22 However, because we--we are curious about

1 soil, by looking at reports that were done--I'm
2 referring to Dr. Baillie's report--you see clearly
3 observations of hydric soils.

4 And, again, these are not our words, you know.
5 Look at the blue dot in Figure 3. These blue dots,
6 legend, you go down, hydric soil. Wetland Number 2,
7 Wetland Number 3, wetland so on and so forth.

8 ARBITRATOR BAKER: So, as I understand it, in
9 order to support your conclusion of hydric soils at
10 Sites 2 through 7, you accept Dr. Baillie's
11 descriptions of the soil, but you disagree with his
12 conclusion; is that correct? Is that a fair
13 statement?

14 THE WITNESS: (Dr. Perret) We don't conclude
15 anything about other wetlands than Wetland Number 1.
16 Our work task was Wetland Number 1. However, we read
17 Dr. Baillie's report. Where's the limitation that we
18 mentioned earlier on? And Dr. Baillie mentioned that
19 these soils in wetlands up of Wetland Number 1 are
20 hydric.

21 Now, I guess the question--we can speculate,
22 but Dr. Baillie can confirm.

1 ARBITRATOR BAKER: Yeah, I was just getting at
2 what--since--since you were accepting his observations
3 but you reject his conclusion, what makes you think
4 his observations are any better than his conclusion?

5 THE WITNESS: (Dr. Perret) Okay. All right.
6 Here is--I think that we have conceptually differences
7 with Dr. Baillie when it comes to Wetland Number 1
8 because--

9 ARBITRATOR BAKER: I think that's very true.

10 THE WITNESS: (Dr. Perret) Yeah. Exactly.
11 Why? Because it has been buried. And, therefore, you
12 need to go deep. Was Wetland Number 2 buried? I
13 don't know because we haven't been. But according to
14 what we read, it doesn't seem so. So, therefore, the
15 depth issue is no more a concern, you see? The
16 concern that we brought forward is depth. And it is
17 very specific to Wetland Number 1. Is this making
18 sense?

19 ARBITRATOR BAKER: I hear you and understand
20 what you're saying. I won't go so far as to say it's
21 making sense yet because I need to think about it.
22 But it will be duly considered, let me assure you.

1 So, help me with the definition back on what I
2 think we found was 15 in yours and 14 in mine. The
3 word "artificially," does that mean manmade? Is that
4 what "artificial" is?

5 THE WITNESS: (Dr. Perret) I would say so.

6 ARBITRATOR BAKER: So, it cannot be a natural
7 process.

8 THE WITNESS: (Dr. Perret) No. No.

9 ARBITRATOR BAKER: So, it couldn't be a
10 windstorm, to use your example.

11 THE WITNESS: (Dr. Perret) No.

12 ARBITRATOR BAKER: It couldn't be a volcano to
13 use your example.

14 THE WITNESS: (Dr. Perret) No.

15 ARBITRATOR BAKER: It couldn't be a mudslide
16 to use examples that we have all around us in this
17 country. It has to be something caused by man.

18 THE WITNESS: (Dr. Perret) Looking at the
19 definition, definitely. Being on-site in Wetland
20 Number 1, obviously, the logic tells you that all the
21 hypotheses that you had of landslide, alluvial deposit
22 all of that, no, no, no. None of the above.

1 ARBITRATOR BAKER: Okay. Last two questions.
2 How close is the road to Site 1?

3 THE WITNESS: (Dr. Perret) To Wetland Number
4 1?

5 ARBITRATOR BAKER: Yes.

6 THE WITNESS: (Dr. Perret) It's actually next
7 to it. The road is delimiting the west side of
8 Wetland Number 1.

9 ARBITRATOR BAKER: Did you look at any of the
10 civil engineering works to see what the municipality
11 did when it built the road?

12 THE WITNESS: (Dr. Perret) Sure. And,
13 actually, that's--you're pointing to something that we
14 found interesting. If you look at Bore Hole Number
15 6--now, I don't know if we can bring it up. I think
16 that I can if I go quick.

17 No, it's in the report. We don't have it
18 here. But you will see that superficially you have
19 ascending rocky layers. And this is the results of
20 road construction. And it's interesting because it's
21 buried at the depths, if I remember correctly--let's
22 say between 15 and 20. And above that, red soil, what

1 we call in that case fill. Below that, red soil.

2 What did happen? Again, speculations, but
3 speculations that do have clear foundations. Fill.
4 The first fill. Then road construction.

5 ARBITRATOR BAKER: Base course.

6 THE WITNESS: (Dr. Perret) Exactly. And then
7 on top of that--

8 ARBITRATOR BAKER: Not my first rodeo.

9 THE WITNESS: (Dr. Perret) --fill. That was
10 clearly shown in Bore Hole Number 6.

11 ARBITRATOR BAKER: Okay. That's very helpful.
12 Thank you, Chairman. Thank you, gentlemen.

13 PRESIDENT SIQUEIROS: I think my questions
14 have already been addressed. Thank you very much.

15 MR. BURN: Sorry there is one question arising
16 out of Mr. Baker's observations.

17 RECROSS-EXAMINATION

18 BY MR. BURN:

19 Q. Dr. Perret, Bore Hole Number 6 and your
20 observations about road material.

21 A. (Dr. Perret) Yep.

22 Q. Are you aware that the municipality had a

1 habit of building roads in the area?

2 A. (Dr. Perret) I'm not aware. I know that there
3 is a municipal road next to it, but--

4 Q. Right.

5 A. (Dr. Perret) --I don't know more than that.

6 PRESIDENT SIQUEIROS: So, could I suggest,
7 just to make sure that we're--at least I'm
8 understanding where Bore Hole number 6--is this--

9 THE WITNESS: (Dr. Perret) Okay. Yep
10 definitely.

11 PRESIDENT SIQUEIROS: --in Slide Number 3.
12 Number 3, is that--

13 THE WITNESS: (Dr. Perret) Sure. That's the
14 one right here. I'm trying to point. That's that
15 one.

16 PRESIDENT SIQUEIROS: I can see it. So, this
17 is--Bore Hole Number 6 is the one--

18 THE WITNESS: (Dr. Perret) Yeah, that's the
19 one. That's this one.

20 PRESIDENT SIQUEIROS: Okay.

21 MR. BURN: Thank you. No further questions.

22 PRESIDENT SIQUEIROS: No questions?

1 MR. LEATHLEY: Thank you, sir. No.

2 PRESIDENT SIQUEIROS: Thank you, Drs. Perret
3 and Singh. Thank you very much.

4 We have no further experts.

5 MR. LEATHLEY: That's right. So, we would
6 just like to make some closing remarks.

7 PRESIDENT SIQUEIROS: Could we have a word--

8 MR. LEATHLEY: Yes, of course.

9 PRESIDENT SIQUEIROS: --before we continue?

10 MR. LEATHLEY: Yeah. Certainly, sir.

11 (Discussion off the record.)

12 PRESIDENT SIQUEIROS: If you would like to
13 proceed then.

14 MR. BURN: Thank you, sir. Dr. Weiler will
15 begin.

16 CLOSING ARGUMENT BY COUNSEL FOR CLAIMANTS

17 DR. WEILER: I don't think we've got time to
18 put up the slides online, so I think we'll just have
19 to go through the paper pages.

20 PRESIDENT SIQUEIROS: Thank you.

21 DR. WEILER: So, as you can see, we've got
22 just ten minutes of material here. There's, you

1 know--easily can get through it all.

2 I'll very quickly introduce the slides for you
3 so that you can look at them later.

4 We just begin, again with some international
5 law points. We go through the key points. I think
6 here is what the--what the nature of the obligations
7 are that the parties have cited that go beyond
8 the--the text itself. So, these are the sources that
9 are candidates for custom and principle, what have
10 you.

11 So, we'll skip past those. That's the first
12 three slides. And that brings us to interpretation.
13 Oh, there it is. Great. And, again, we're going to
14 skip really quickly past here.

15 So, what you've got here in this slide and in
16 the explanatory notes is an explanation of the various
17 doctrines that inform Article 10.5; highlighted in red
18 are the four doctrines that we primarily rely upon.

19 And skipping forward yet again, the next slide
20 is the expectation slides. And they go on for a
21 while. I'm going to go through them and take us
22 to--oh, these slides aren't numbered here on this

1 page.

2 Oh, that's right. They're numbered really
3 small. Oh, okay. I see. Page 12. Thank goodness
4 for those bifocals that they--the non--the
5 nontransparent bifocals. So, I think this slide is a
6 useful one to just drive home.

7 So, I think the parties are both in agreement
8 that as regards legitimate expectations--well, let me
9 rephrase that.

10 Up until oral argument, the parties seemed to
11 be in agreement that legitimate expectations were the
12 kind of doctrine that was relevant to our Article 10.5
13 analysis. And in that regard they seem to be in
14 agreement that it was relevant what the nature of the
15 municipal law regime was and whether there had been
16 any specific assurances given.

17 And in this case, we pinpoint the EVs and the
18 permits as specific assurances.

19 And in this slide we think we demonstrate
20 fairly forcefully why--with regard to the TAA
21 injunction and the municipal suspension of
22 construction permits why we have a deficit with regard

1 to expectations.

2 We think that our expectations have not been
3 fulfilled in a reasonable manner because in August and
4 November of the year 2011, SETENA concluded that the
5 EVs were indeed valid and they--these two agencies,
6 TAA and the municipality, nonetheless have decided to
7 maintain their injunctions.

8 So, again, moving forward. We get to
9 Mr. Martínez. I guess before we should get there, we
10 should go to Slide 14. No, I take that back.
11 Slide--yeah, Slide 14.

12 So, one of the key points to make when we're
13 talking about the minimum standard of treatment is
14 there's lots of--there's lots of terms that can be
15 found in customary international law that are
16 relevant, due process, arbitrariness, fairness.

17 They all should be seen as a lens through
18 which to best focus on the circumstances of the case.
19 And it seemed to us that with regard to Mr. Martínez's
20 conduct, arbitrariness seemed to be a good fit.

21 With regard to Ms. Diaz and her counterpart,
22 the best lens seemed to be due process. Legitimate

1 expectations seemed to be the best lens for the
2 overall picture. And then for Mr. Bogantes, it seemed
3 to us that bad faith and unlawful conduct seemed to be
4 the best lens.

5 So, in each case, there's a lens that we use,
6 and there's a lot of law that informs that lens.

7 With regard to Mr. Martínez, we think that you
8 might even want to refer to a little known case called
9 the Neer case in which that so-called test announced
10 in 1926 by two parties of a three-person chamber of
11 the U.S.-Mexican Claims Commission tried to address
12 what it thought would be an interesting or relevant
13 test with regard to finding liability.

14 So, when you look at that test, when you
15 unpack it, you basically have four--I don't know--five
16 questions. First one, did his conduct on the whole
17 constitute an outrage? We think we could probably end
18 it right there because we think it did constitute an
19 outrage. But let's for the sake of argument move
20 forward.

21 Was it bad faith? No, we don't think he acted
22 in bad faith. Was there willful neglect of duty? You

1 can judge for yourself from the testimony that you've
2 seen whether it was willful neglective duty or just
3 abject neglect or abject negligence. Let's move on to
4 the fourth question.

5 Did Mr. Martínez's conduct represent an
6 insufficiency of government action that fell so short
7 of international standards today that--and those, of
8 course, would include the standards you find in
9 Chapter 17 and Article 17.3.1 in particular.

10 Did it fall so far short of international
11 standards that every reasonable and impartial
12 person--they say man--would readily recognize this
13 insufficiency.

14 And then when you're in that page, the next
15 question is it doesn't matter whether it's a deficient
16 execution of an "intelligent law," or if it's actually
17 evidence of municipal law failing to empower
18 Mr. Martínez to get to the right result.

19 And in this regard, I would like to just
20 remind you of Judge Chinchilla's evidence. She seemed
21 to think that basically, Mr. Martínez had no option
22 but to seek a new trial rather than agreeing to a

1 reasonable extension until the judge's hand got
2 better.

3 It seemed that from Mr. Martínez's evidence,
4 he just was unwilling to do so. Not that he--he
5 thought that it was--they didn't have the discretion
6 to do so. But he was just unwilling to do so.

7 So, I think that if you combine the Chinchilla
8 and Martínez evidence, you can get to even this--what
9 we would say is too strict a standard under the Neer
10 test just given the evidence you have on hand.

11 Lots more I could say, but I see we only have
12 two and a half minutes left. No, we don't? You want
13 me to keep going.

14 So I'm skipping way past now due process. I'm
15 skipping way past--I'm skipping all the way down to
16 Slide Number 33. No. Make that 32. And this will be
17 my last--I think my last point when I cover this. And
18 this is, to a certain extent, owed to my colleagues
19 across the way. We salute them for their innovative
20 strategy. We think that their strategy is made up of
21 these component parts.

22 That, essentially, you--you argue that the

1 State--host State compliance with municipal law is
2 really the answer to everything. And you come up with
3 a bunch of ex post facto allegations that technically
4 shouldn't be before the Tribunal, that aren't based in
5 evidence on the record with regard to alleged
6 noncompliance on the part of the Claimants, and you
7 follow that post hoc approach in demanding that
8 actually we not talk about the merits of the case but
9 instead have an admissibility hearing in which we talk
10 first about whether the enforcement that we claim
11 violates international law was nonetheless in
12 accordance with municipal law and that if it is, we
13 should stop right there.

14 We would submit that that makes no sense. And
15 we would further submit that if you--as you go through
16 these slides and you keep in mind the argument about
17 ex post facto allegations and the many cases that
18 we've cited here explaining why ex post facto analysis
19 is completely inappropriate, that you will agree that
20 a lot of this hearing that we've had has been
21 fascinating, really interesting, but not relevant to
22 the actual facts of this case that you need to decide.

1 MR. BURN: And I think I have one minute to
2 can capitalize on Dr. Weiler's very eloquent
3 observations. And just to bear that out, much of this
4 hearing--most of this hearing--has been taken up with
5 hearing evidence relating to the arguments put by the
6 Respondent that--and you'll recall I said this in
7 opening--is irrelevant--strictly speaking is
8 irrelevant. And we could have refused to engage with
9 it. Now, tactically maybe we made a mistake by
10 engaging with it because it presents it to you on the
11 basis that there is somehow something that is
12 relevant. It is no less irrelevant than it was last
13 Monday.

14 The environmental issues/the Costa Rican law
15 issues are irrelevant. Why are they irrelevant?
16 Because it's ex post facto. This is a reworking of
17 what happened. This case, as I said at the outset, is
18 about permits that were applied for, that were issued,
19 and that were relied upon.

20 And after the event, the Respondent seeks to
21 unpick all of that with hindsight trying to say--make
22 all sorts of arguments about noncompliance that were

1 not reflected at the time. There were all sorts of
2 opportunities that the various agencies had at the
3 time to do things.

4 And, in fact, they did look at things at the
5 time and right through to 2011, everything was fine.
6 All complaints that were--were being introduced by
7 reason--for reasons of a vendetta were dismissed.

8 So it's only in early 2011 in the chronology
9 that you really see things start to change. 7th
10 March, 2011, Bucelato meets with the Municipality.
11 Suddenly the next day the Municipality, on the basis
12 of one meeting with three people, issues a freeze
13 order on--on the construction permits. A little while
14 later material is filed with SETENA. SETENA, an
15 agency we have always respected and said "This is the
16 agency that should be in charge here," should--is the
17 one that issues the EVs that understands, that
18 interrogates these things. They said in April 2011,
19 "Stop. We need to investigate."

20 The Investors didn't like that fact. They
21 didn't think there was good reason for that. But they
22 respected it. They respected the stop--the

1 allegations of doing works during that time are
2 completely without merit and no evidence before you to
3 bear them out.

4 It took seven months for SETENA to get to the
5 conclusion that the Investors were right. There was
6 nothing to worry about. There was no breach. And on
7 the 15th of November, 2011, that is the crucial moment
8 in respect of this claim. If the Respondent had
9 accepted what SETENA said at that moment, and had
10 just--had said, okay, this has been looked at, it's
11 been examined, and no problem has been found, we
12 wouldn't be here today. There wouldn't be an
13 international law claim. But what happened? The
14 Respondent and two or three of its agencies, to use
15 the vernacular, doubled down. The Muni ignored
16 SETENA's 15 November 2011 lifting of the--of the
17 suspension of the EV. The--and Martínez and the
18 prosecutor's office criminalized the matter.

19 You heard the evidence. The allegations of a
20 forged document are completely ludicrous. The
21 allegations of wetlands abuse--again, he went to INTA.
22 He went to INTA and said, "Please tell them go and

1 examine this and tell me."

2 And they said, "There's no wetland soil."

3 And--

4 MR. LEATHLEY: I'm sorry to interrupt, sir. I
5 really am sorry.

6 MR. BURN: I just--just. Sorry--

7 MR. LEATHLEY: No, no, this is not a question
8 oriented at you, sir. It's just a clarification that
9 we will be able to go past 7:45 because we have a half
10 hour of submission to make.

11 MR. BURN: I have 30 more seconds, and then
12 I'll happy hand it over.

13 PRESIDENT SIQUEIROS: 30 seconds.

14 MR. BURN: The--and at that point Martínez
15 commissioned an injunction--a criminal injunction
16 which remains to this day, and there are all sorts of
17 other acts at that point in time, and that's when the
18 Project was destroyed. That's when the Respondent
19 exposed itself to these claims.

20 I'm going to stop there, but there is much
21 more to be said, of course.

22 PRESIDENT SIQUEIROS: Thank you.

1 CLOSING ARGUMENT BY COUNSEL FOR RESPONDENT

2 MR. LEATHLEY: Thank you, sir. I'd like to
3 stand, if I may.

4 Thank you. And, sir, we are going to be doing
5 a presentation, and I will take 30 minutes. So, I was
6 very concerned on the encroachment of time.
7 Unfortunately, this is not a presentation I can cut
8 short at any point before then.

9 And we will also be putting up some slides.
10 Members of the Tribunal, I would invite you to ask
11 yourself whether you feel you've presided over a
12 violation of international law or whether you feel
13 you've presided over an ongoing Costa Rican dispute.
14 And we believe that we've participated in the latter.
15 And that, in and of itself, should guide your
16 conclusion that this is not a dispute that triggers
17 international law standards of protection. Customary
18 international law is the floor, not the ceiling. It's
19 the threshold below which a State's conduct should not
20 fall.

21 That requires evidence of egregious conduct
22 which offends the sense of judicial propriety, and to

1 date we have not seen any evidence that offends
2 customary international law.

3 As stated in our opening, it is not the role
4 of an international tribunal to sit on appeal against
5 the correctness of individual administrative acts. No
6 international tribunal is a supernational appellate
7 body seized in order to review local administrative
8 decisions.

9 Now, this is not a test which invites
10 discretion on the part of an international tribunal.
11 That is to say, it is not available to a tribunal to
12 find Costa Rica liable because of a decision it may
13 not like or because of an official's reasoning it
14 might find objectionable. It is a test that has a
15 disqualifying consequence that should lead you to a
16 conclusion that international state responsibility
17 simply has not been invoked.

18 And yet this week Claimants have invited you
19 to decide appeals on EV applications, construction
20 permits, administrative proceedings, criminal
21 proceedings, environmental determinations and
22 resolutions, and they've even asked you to hear their

1 appeal against INTERPOL's conduct which Costa Rica
2 does not control.

3 But to understand the inappropriateness of
4 this appeal is to understand the audacity of the
5 circumstances in which those requests are made. The
6 alleged investors do not come with clean hands. In
7 the establishment of their investment, Costa Rican law
8 was violated. In the operation of the investment,
9 unlawful misrepresentations of the conditions of the
10 land misled Costa Rican authorities into condoning
11 Claimants' false environmental assessments resulting
12 in the unlawful issuance of permits. Notwithstanding
13 evidence of wetlands, showing we believe in the
14 evidence today to exist today and to have existed at
15 the time they acquired the land. There were forests
16 also shown to exist. And, furthermore, aside from the
17 forests, there only has to be impermissible cutting of
18 one tree to constitute a violation of Costa Rican law.

19 And importantly, Claimants engaged in the
20 unlawful fragmentation of the Project land; therefore,
21 evading critically important environmental controls.

22 Now, when reality hit home and adverse

1 decisions ensued, Claimants condemn the very system
2 they were trying to circumvent from the start.
3 Members of the Tribunal, we see nothing but a case
4 replete with dreadful hypocrisy.

5 In order to assist your deliberations on the
6 multiple lines of activity that you heard and had to
7 grapple with this week, I want to take this
8 opportunity to offer you a framework to assist your
9 deliberations. First, I would like to return to the
10 EVs and the construction permits that have formed a
11 key part of understanding the illegal activity we
12 continue to insist Claimants have engaged in.

13 Second, I would like to reflect on the
14 administrative and judicial proceedings that remain
15 available to Claimants that they have simply failed to
16 invoke.

17 And I'll also consider the injunctive relief
18 as well as the suspensory effect of the criminal
19 proceedings.

20 And, third, I would like to offer Costa Rica's
21 very brief observations on the significance of some of
22 the evidence you have listened to this week.

1 I will not have time to make anything other
2 than preliminary observations on Costa Rican law since
3 this really requires particularly careful analysis in
4 the post-hearing briefs. The reason for this is
5 because Costa Rica takes great issue with a
6 specific--with specific representations as to Costa
7 Rican law expounded by Mr. Ortiz for the first time
8 during the hearing.

9 Based on his conclusions, we do not find him
10 to be an experienced expert capable of assisting this
11 Tribunal to identify the correct interpretations of
12 Costa Rican law. As a result, we would invite the
13 Tribunal to await the post-hearing briefs in order to
14 see precisely where we take issue with Mr. Ortiz and
15 how Costa Rican law can be proven to be quite distinct
16 from how he has represented it.

17 By way of example, Mr. Ortiz said there is no
18 counter injunction available and that Claimants should
19 avail themselves of that at the time. This is plainly
20 incorrect as a matter of Costa Rican law. There are
21 examples of such mechanisms having been taken in the
22 past which we will explain in our post-hearing brief.

1 As we will show, such recourse along with other
2 recourses which Mr. Ortiz does admit exist, were
3 available to Claimants and whether through choice or
4 lack of awareness, such recourse was not pursued.

5 So, let me turn to the EVs and the
6 construction permits.

7 In relation to the EVs and the construction
8 permits, I would invite the Tribunal to return to our
9 table from our opening submission. Costa Rica stands
10 by every submission made in regards to this table.
11 And I would like to now punctuate this table with the
12 evidence this week has produced in relation to it. In
13 relation to the Condo Section, clear evidence exists
14 of an unlawful granting of the EV.

15 The starting point is Protti, a clear red
16 flag. Mr. Burn can preface the Protti report with the
17 phrase "so-called" as much as he likes. But
18 Claimants' own witnesses and experts have confirmed
19 its existence and relevance.

20 What does this signify? It proves Claimants
21 failed to inquire into the possibility of wetlands
22 that you have now heard today existed at the time.

1 Even though Claimants' agents knew of Protti
2 and they knew of Mr. Mussio's sensitive areas, they
3 failed to include them in the D1 Application. No
4 explanation has been provided.

5 Mr. Mussio acknowledged the relevance of the
6 Protti Report as a red flag given, he said, it
7 represented the state of the land today.

8 Mr. Mussio acknowledged to Mr. Baker that a
9 hydrogeologist was needed, which is precisely what
10 Mr. Protti was, as acknowledged by Mr. Bermúdez.
11 Claimants had everything they needed. The red flag
12 had been raised; and, to put it politely, they turned
13 a blind eye to it.

14 Dr. Jurado testified very clearly that
15 suspension of any construction permit that is
16 underpinned by a deficient or unlawful EV would
17 undermine that very same construction permit.

18 In relation to the easements, this has indeed
19 proven to be symptomatic of the Claimants' behavior
20 and lack of respect for Costa Rican environmental
21 laws. Here Claimants engaged in fragmentation and
22 unlawful construction in the absence of the right EVs.

1 By way of clarification, a particular lot can be
2 divided in a way to allow six houses to be built
3 around an access road. However, Claimants abused this
4 option in two ways.

5 First, they created nine contiguous easements
6 in the overall section called the easements. This
7 meant they were essentially creating a large
8 urbanization by means of an array of easements which
9 does not conform to the exceptional way in which an
10 easement is meant to be employed.

11 Second, the division of the overall Las Olas
12 Project Site in such a way to create the composite
13 easement section was an illustration of fragmentation
14 that is unlawful.

15 We noted that Mr. Ortiz provided a very
16 evasive answer to the President's straightforward
17 question on fragmentation at the end of his testimony,
18 and we would invite you to await the post-hearing
19 brief and our explanation as to how the law should be
20 applied.

21 Importantly, Mr. Ortiz conflated what should
22 have happened prior to the D1 Application with what

1 can happen after the division of the overall site when
2 it came to slicing up the particular easements into 6
3 or actually 8 lots per easement.

4 So, what have we learned this week with
5 relation to this table? First, we have seen from many
6 sources that the Project comprised construction
7 phases, and the easements was Phase 1. And yet it was
8 separated out along the west side to create artificial
9 easements that would allow wetlands to be built
10 without going through an EV process.

11 This was clearly in contravention of the
12 express language and spirit of Article 94 of the
13 Biodiversity Law.

14 No better case than this exists to show how
15 Article 94 is meant to operate. Mr. Bermúdez
16 testified that the easements were always part of the
17 Las Olas Project and, therefore, the totalidad, the
18 entirety, should have been assessed as part of the EV
19 process. It was not. Only the condo section was
20 assessed in the EV process, as the D Application
21 proves.

22 As part of the rush to build on the easements,

1 Mr. Bermúdez confirmed this week--or last week--in his
2 testimony the existence of early works undertaken on
3 easements 8 and 9. He confirmed this expressly. This
4 was in 2008 and 2009, years in which neither of
5 easements 8 and 9 have construction permits.

6 Therefore, this was unlawful work. But critically,
7 unlawful work on top of wetland number 1 shown today
8 to have been refilled as Costa Rica's experts have
9 clearly illustrated.

10 In relation to the construction permits for
11 easements 8 and 9 in 2008 and 2009, no evidence exists
12 whatsoever to this day. Mr. Mussio made a feeble
13 attempt to testify to their destruction due to floods
14 when the municipality's own letter at R-521 confirms
15 that they were never approved.

16 This is R-521 on the screen. What Mr. Mussio
17 could not respond to when on the stand was the fact
18 that the permit cited in the Claimant's new letter,
19 C-295, from the municipality that were meant to have
20 been damaged in the floods--and this is the paragraph
21 which refers to the construction permits--meant to be
22 damaged in the floods--that reference relates to the

1 concession, not the easements. Here we have a copy of
2 the Concession. This is C-40. You see the same
3 reference? And here we have Claimants' Memorial
4 making express reference. This is the construction
5 permit for the Concession.

6 We will be sure to explain in full in our
7 post-hearing brief events that implicate directly
8 Mr. Mussio's unsuccessful attempt in the days before
9 this hearing to shore up this critical gap in
10 Claimants' evidence. To put it politely, we found
11 Mr. Mussio far from rigorous in his exercise of
12 veracity.

13 Second, Mr. Bermúdez testified to events he
14 was directly involved in regarding the unlawful
15 construction on the easements, easements 1 to 7.
16 Mr. Bermúdez confirmed the easements section was part
17 of the whole project thereby confirming the violation
18 of Article 94 of the Biodiversity Law: Mr. Bermúdez
19 also confirmed that as Environmental Regent, he had
20 been misled by Mr. Aven in representing to the
21 municipality that the construction permit application
22 and the mitigation plan to undertake earthworks was

1 based on the Condo Section EV when it was not. The
2 Municipality's understanding--sorry, Municipality's
3 misunderstanding was never corrected, either in
4 writing or, as Mr. Baker proved, orally.

5 Third, and as a consequence of this,
6 Mr. Bermúdez confirmed construction on the easements
7 had occurred in the absence of an EV. The table
8 remains a sound assessment of what Claimants base
9 their entire case on. Claimants' witnesses confirm
10 the developer's responsibility, such as Claimants'
11 duty to disclose. Mr. Ortiz acknowledges such
12 preliminary studies prior to making a D1 application
13 had to be exhaustive. Mr. Bermúdez accepted D1
14 applications required full disclosure.

15 Claimants accept the police powers of the
16 State and the need to protect wetlands if they exist,
17 and yet Claimants reject the police powers of the
18 agencies to identify and protect a wetland, even if
19 that means reversing earlier assessments. Something
20 Dr. Jurado confirmed unequivocally is something the
21 State can do. They can reassess.

22 We respectfully ask when the Claimants--when

1 are the Claimants going to accept any responsibility
2 for their own conduct and the existence of the wetland
3 and ecosystems on their land?

4 SETENA visits to verify D1 applications were
5 not compulsory as Dr. Jurado testified and indeed as
6 Mr. Bermúdez agrees. Therefore, notwithstanding any
7 diligence by the State after issuance of the Condo
8 Section's EV, the burden of wetland identification and
9 management did not shift to the State after the EV
10 applications and construction permit applications had
11 been misrepresented by Claimants.

12 Indeed, as Ms. Vargas testified, the developer
13 is under a continuing duty to alert the environmental
14 agencies to any condition on the land that would merit
15 protection.

16 Let me turn to the administrative and the
17 judicial proceedings, the second part of--that a big
18 chunk of time has been dedicated to this and this is
19 because this is Claimants' case. The other key
20 element to Claimants' case is their due process
21 argument. This is closely linked to their allegations
22 of arbitrariness. You've heard that confirmed by

1 Mr. Weiler. Put simply, Claimants did not show good
2 faith, and they did not use their advantage--did not
3 use to their advantage the very system they criticize
4 for having failed them. Critically, everyone agrees
5 there are steps and measures that could have been
6 taken. Claimants tried to allege that the entire
7 Costa Rican legal system is either broken, flawed or
8 corrupt. This is another audacious claim with
9 absolutely no evidence.

10 Their only evidence is a litany of adverse and
11 nonfinal decisions which prove nothing.

12 The evidence before you does not support an
13 award that would essentially say the entire legal
14 system and institutional infrastructure of the
15 Republic of Costa Rica has collapsed below the
16 customary international standard in this case.

17 On numerous occasions, Claimants have had
18 available to them recourse and means of seeking relief
19 from a decision rendered against them. And in those
20 slides I would just like to go through, we've
21 identified--let me explain what these slides mean.
22 This is the process that would flow from the SINAC

1 injunction. The boxes that are completed with a check
2 mark indicate what steps the Claimants actually took.
3 But the grade-out boxes are the steps that remain that
4 either can be taken or could have been taken had they
5 availed themselves of the opportunity, whether they
6 did or did not at the time is a separate question.
7 Maybe they didn't know. Maybe their legal advice was
8 wrong, but it was available.

9 And let's just scroll through because we have
10 one for every avenue. The SINAC injunction, the TAA
11 Injunction here. Let's go back, please. The TAA
12 Injunction. Not a single measure has been followed.
13 Not one. And we indicate here how many are or were
14 immediately available. Their choice. Their right.

15 Let's go on, please. Here we have the SETENA
16 injunction. Not a single box checked. They did not
17 employ the system. It's there to protect them. It's
18 there to help them. They did not exercise any of
19 their rights, and here is the suspension of the
20 construction permits. Two steps taken. Again, a huge
21 vacuum of inactivity.

22 They have failed to take the opportunity in

1 time or at all.

2 Let's move to the criminal proceedings. In
3 respect to the criminal proceedings during the week we
4 detected a natural curiosity on the part of the
5 Tribunal as to how environmental violations could
6 result in a custodial crime. We hope you have
7 clarification from Mr. Martínez and Judge Chinchilla,
8 but we will be sure to explain this in our
9 post-hearing brief.

10 We completely disagree with the submission
11 made a moment ago by Claimants regarding the
12 application of the criminal laws that Mr. Martínez is
13 alleged to have used in violation presumably of Costa
14 Rican law.

15 Of course, Claimants protest with appreciable
16 personal concern why criminal culpability could
17 develop. But the answer is quite clear to a criminal
18 lawyer.

19 If you commit a criminal act, repercussions
20 ensue. Mr. Martínez applied the facts at the relevant
21 stage to the crimes which permitted custodial
22 sentences. But the judge, not Mr. Martínez,

1 sanctioned this, and the judge, and any judge
2 will--that will still have the occasion to sit in
3 judgment over Mr. Aven can revisit and review this.

4 Severe repercussions flow from all acts. The
5 same applies to anyone, such as you and me licensed
6 attorneys. If we fail to pay a bill, then we receive
7 a judgment debt claim, we receive a court order fail
8 to pay we're declared bankrupt, we may lose our
9 license to practice, all from failing to pay a bill.

10 The resulting consequence is arguably severe,
11 but that is how the law operates; and above all,
12 intervening steps were and still are, as this slide
13 illustrates available to Mr. Aven to defend himself.

14 In this regard, Mr. Morera admitted that
15 matters are still in process. They're ongoing.
16 However, proceedings are suspended because Mr. Aven is
17 not in the country. In fact, his personal rights are
18 protected by Costa Rican law because he cannot be
19 tried in absentia.

20 Mr. Morera testified frequently of Mr. Aven's
21 criminal strategy. Clearly, he and Mr. Aven were
22 aware of their options or should have been. Mr. Aven

1 had the chance to mitigate and settle. But when it
2 came to the crunch moment, Mr. Aven, according to
3 Mr. Morera's testimony, chose not to do so as it was a
4 matter of pride.

5 That is Mr. Aven's right. But it is
6 hypocritical to then blame the State for pursuing the
7 next step in the process.

8 As for the shooting of Mr. Aven, Mr. Morera
9 testified that Mr. Aven had, quote, no idea who shot
10 at him. And yet Costa Rica is somehow taking the
11 blame.

12 Mr. Morera applied to the wrong body for
13 Mr. Aven's personal protection from the State. Again,
14 an error of Mr. Aven's lawyer. That is being passed
15 on to Costa Rica as its responsibility. When
16 testifying passionately, Mr. Morera was proclaiming
17 there was no justice. But he was plainly wrong. He
18 was actually protesting losing and making mistakes.
19 Justice was applied and at all times rationalized.
20 Judge Chinchilla reviewed the file and offered very
21 clear and specific insights to how Costa Rican
22 criminal--how the Costa Rican criminal justice system

1 has functioned and can continue to function.

2 In summary, the Claimants did not use or
3 properly use the system, as our slide still
4 illustrates. This cannot be Costa Rica's fault.
5 Whether the relevant act was administrative or
6 judicial, the Claimants have always had recourse to
7 remedy any errors, or they have yet to exercise their
8 rights. Either scenario does not create a violation
9 of international law.

10 Whether relevant to due process, arbitrariness
11 or FET, ignorance of the law is not a defense. And
12 passing the buck to the lawyers isn't either. What is
13 more, Costa Rican law makes this very clear. And
14 Mr. Aven was on notice of this when he set foot in
15 Costa Rica.

16 Costa Rican law is on the side of
17 environmental protection. There is no acquired right
18 to negatively affect the environment in Costa Rica,
19 irrespective of any EV or even permit one might have
20 been able to elicit from the Costa Rican authorities.
21 And, again, what none of Claimants' witnesses deny,
22 Costa Rica's stringent system of environmental

1 protection is implemented within the confines of the
2 rule of law.

3 I'd like to offer Costa Rica's very brief
4 observations on the significance of some of the
5 evidence you have listened to this week. What has
6 emerged after a week of hearing Claimants and their
7 legal and technical advisers and their experts is the
8 following: First, that during the examination of
9 Claimants, Mr. Aven, Mr. Janney, Mr. Shiolenno admitted
10 that they were looking for a high return on the
11 minimal commitment of money without any commitment of
12 resources. They also had no idea how they were going
13 to make their money at the back end, to use Mr. Aven's
14 phrase.

15 To justify their lack of commitment to their
16 alleged investment Claimants take an opportunistic
17 approach. When they want to reassure you that they
18 acted properly in proceeding as if Las Olas was
19 wetland free, they put forward their experience in the
20 development of properties in the U.S.; but when faced
21 with the misrepresentation they committed regarding
22 the conditions of the land and the staging of its

1 development so as to evade environmental obligations,
2 Claimants put forward their lack of environmental
3 expertise and an alleged blind reliance on bad
4 technical and legal advice. Costa Rica cannot and
5 should not be held internationally liable for
6 Claimants' lack of judgment. Ignorance of the law is
7 no defense, and neither is it an option to blame
8 lawyers, their agents.

9 I'd like to comment briefly on Mr. Aven.
10 Mr. Aven's testimony, we felt, was truly revealing.
11 We believe his testimony represents what has driven
12 this entire case and the cause of this arbitration.
13 Mr. Aven is either profoundly unaware of the proper
14 way of operating in Costa Rica or the legal and other
15 advice he has received has been woefully poor.

16 We suspect the reality is a combination of the
17 two framed by a mind-set that is quick to presume
18 wrongs committed by others and that decisions adverse
19 to him are automatically a sign of injustice. Now, we
20 do not presume to make this a personality test, but
21 Mr. Aven is the person around whom every decision and
22 adviser has orbited. And, therefore, we consider it

1 informative to assist the Tribunal in joining the dots
2 in this case.

3 Mr. Aven's testimony was weak. Faced with a
4 critical lack of evidence regarding the Claimants'
5 ownership of the various plots that we have
6 identified, his frail offering was an ambiguous
7 indication of some kind of arrangement which the
8 documents do not support.

9 He has also essentially testified that he has
10 committed a "fraude de ley," constructive fraud.
11 Mr. Aven describes his evasion of Costa Rican laws as
12 "one of those quirky laws in Costa Rica." With
13 respect, Costa Rican law disagrees.

14 Mr. Ortiz's intent to roll back from
15 Mr. Aven's admission was unconvincing, both in terms
16 of the constitutional arguments and his reading of
17 human rights law and the Inter-American Jurisprudence.

18 In this regard, Claimants' manifest disregard
19 for Costa Rica's stringent environmental requirements
20 denies them the ability to avail themselves of any
21 right they may have--they may--they might have
22 acquired in Costa Rica.

1 Mr. Aven was pushed on the legal advice that
2 he took only to illustrate further the fragility of
3 his testimony. We have very little faith that the
4 Claimants have properly disclosed documents in
5 accordance with the Tribunal's directions.

6 Mr. Aven's written legal advice is
7 nonexistent. Contradicting his original testimony
8 under oath that he had received numerous written legal
9 advice on a range of matters.

10 We seem to discern at the end of Mr. Aven's
11 testimony that his legal advice had been stolen, but
12 this does not explain why his own lawyers and advisers
13 could not produce their original copies of the very
14 same advice they presumably held on their computers.

15 This is legal and--this legal and other advice
16 is something we would expect to have been scrutinized
17 in detail in preparation for this Arbitration, and
18 yet, it seems to be nonexistent.

19 Our conclusion of this unresolved
20 contradiction does not reflect well on Mr. Aven whose
21 testimony and, indeed, entire claim, we submit, should
22 be treated with a great deal of skepticism. He did no

1 due diligence and was allegedly entirely in the hands
2 of advisors who got it wrong.

3 Instinctively, Mr. Aven categorically admitted
4 that the investment was the acquisition of the land.
5 This is fundamentally important to both Claimants' FET
6 and expropriation claims, and it also utterly belies
7 the linguistic meandering proposed by Claimants'
8 counsel in their opening submissions as to what his
9 investment was.

10 In clarifying how this investment was made,
11 how fragmentation was designed, and how nondisclosures
12 occurred, one has to look at the people involved.
13 Juan Carlos Esquivel was the "key guy," according to
14 Mr. Aven, the one who merged the different sections
15 into one property. Meanwhile, Mr. Pérez, the lawyer,
16 was key to then fragmenting the property into the
17 Condo, Concession, and Easement, and we've not heard
18 from either in this Arbitration.

19 The other person close to Mr. Aven's plans was
20 Mr. Mussio, someone who seemed to develop selective
21 amnesia during his testimony, which will also be Mr.
22 Morera's hope for his wife, if she saw his testimony

1 on the Internet.

2 Mr. Aven relied on these advisors a hundred
3 percent. Quote: "I don't know what the laws in Costa
4 Rica are," he said.

5 "I just signed what was put in front of me,"
6 he testified, even in a language he could not
7 understand.

8 By contrast, Mr. Bermudez seemed generally
9 discontent with having been put in a position by Mr.
10 Aven that compromised his representations with
11 officials.

12 Mr. Bermudez provided important and
13 unencumbered testimony that confirmed very clearly the
14 misrepresentations that he had made at a key stage in
15 the obtaining of construction permits over the
16 easements.

17 Notably, Mr. Bermudez was the only fact
18 witness appearing before you who has no possible means
19 of gaining financially from outcome of this
20 Arbitration.

21 Let me comment, of course, on Costa Rica's
22 witnesses. As for our witnesses, we respectfully

1 submit that Hazel Díaz showed herself as the diligent
2 public official she is. She confirmed that this case
3 is typical of many others that she sees.

4 Ms. Mónica Vargas is a modest young lady who
5 sought merely to fulfill her role within the
6 Department within the Municipality.

7 And Mr. Martínez testified very clearly and
8 consistently on the rationalization he employed when
9 going through every stage.

10 Members of the Tribunal, this leads us to
11 where your deliberations will take you: International
12 law. We would ask the Tribunal revisits the
13 United States Intervention, which we would agree with,
14 in large part.

15 The Claimants have not shown anything other
16 than legitimate expectations that support Costa Rica's
17 defense. They knew, or should have known, the law.
18 Lack of due diligence is no defense. They knew that
19 issues and challenges arise in the application
20 process; and yet, they cannot now say that this is
21 evidence of a broken system.

22 They knew of the precautionary and

1 preventative principles and how that translates into
2 practice; and yet, they cannot run away from the
3 legitimate expectation that it be enforced when it has
4 to be.

5 In terms of their expropriation claim, the
6 Claimants still own the land, and Mr. Erwin has
7 testified very clearly today, they can still make
8 something of it. Contrary to what Mr. Weiler said at
9 the outset, the project as a whole was not the
10 investment. But as Mr. Weiler noted, the investment
11 was not the permits and the licenses.

12 And I've already commented on how we see due
13 process arguments in relation to the slides that
14 you've seen; but even putting aside the denial-of
15 justice-arguments which we've made previously, in
16 summary, we see no basis for this claim to prevail
17 under any ground of Chapter 10 of CAFTA.

18 So, let me conclude. One more minute, sir.

19 It's necessary for me to invite you to imagine
20 the world in the circumstances of an award in favor of
21 Claimants. An award in favor of Claimants would be a
22 game-changer for international law; notably, no

1 comparative authority to this case exists, and this is
2 for a very good reason.

3 An award for Claimants would mean that a State
4 could be found liable for acts that have not been
5 found to be unlawful according to the State's own
6 judicial and administrative authorities.

7 Now, that may not surprise you. But it would
8 be compounded by more. Because an award in favor of
9 Claimants would have to ignore the processes that
10 remain available to the Claimants to seek domestic
11 relief. Such an award would endorse conduct of
12 investors who make no effort to properly understand
13 and apply the law and who fail to activate the
14 multitude of avenues and judicial and other recourse
15 available to them, and whose principle complaint is
16 that a low-level administrative issue has gone against
17 their preferred interests. Such an award would invite
18 every investor subject to ongoing criminal processes
19 or administrative or other processes to sue the
20 Sovereign State before an international tribunal on
21 the basis that they did not agree with a decision
22 which had not even been concluded.

1 So, Members of the Tribunal, we would
2 respectfully urge this Tribunal not to find a decision
3 that would stretch customary international law beyond
4 all recognition.

5 It's just left for me to thank you very much
6 for your tremendous engagement this week and to wish
7 you a safe journey home.

8 Thank you.

9 PRESIDENT SIQUEIROS: With this, we conclude
10 this Hearing, and we'll meet once again on
11 February 9th.

12 MR. BURN: I thought it was 7th, but I'm sure
13 you're right, sir.

14 We'll certainly meet again.

15 PRESIDENT SIQUEIROS: What's that?

16 MR. BURN: We'll certainly meet again.

17 MR. LEATHLEY: Thank you.

18 MR. BURN: Thank you very much.

19 PRESIDENT SIQUEIROS: The civility of both
20 counsel was evident. Although passions sometimes run.
21 I was very--I wouldn't say surprised, but welcomed by
22 the civility in which both counsel conducted

1 themselves during this Hearing.

2 Thank you very much.

3 MR. BURN: Thank you, sir.

4 MR. LEATHLEY: Thank you.

5 (Whereupon, at 8:04 p.m., the Hearing was
6 concluded.)

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CERTIFICATE OF REPORTER

I, Michelle Kirkpatrick, RDR-CRR, Court Reporter, do hereby certify that the foregoing proceedings were stenographically recorded by me and thereafter reduced to typewritten form by computer-assisted transcription under my direction and supervision; and that the foregoing transcript is a true and accurate record of the proceedings.

I further certify that I am neither counsel for, related to, nor employed by any of the parties to this action in this proceeding, nor financially or otherwise interested in the outcome of this litigation.



Michelle Kirkpatrick

CERTIFICATE OF REPORTER

I, Margie R. Dauster, RMR-CRR, Court Reporter, do hereby certify that the foregoing proceedings were stenographically recorded by me and thereafter reduced to typewritten form by computer-assisted transcription under my direction and supervision; and that the foregoing transcript is a true and accurate record of the proceedings.

I further certify that I am neither counsel for, related to, nor employed by any of the parties to this action in this proceeding, nor financially or otherwise interested in the outcome of this litigation.

MARGIE R. DAUSTER