

尼加拉瓜在边境地区实施的特定活动案——尼加拉瓜应向哥斯达黎加支付的赔偿

赵雨晴、孔令杰

[案件导读]

本案涉及尼加拉瓜在哥斯达黎加领土上进行不法活动造成的生态环境损害赔偿争端。¹ 在 2015 年尼加拉瓜在边境地区实施的特定活动案的判决中，国际法院判定尼加拉瓜在两国边境地区开凿水道和建立军事存在等活动侵犯了哥斯达黎加的领土主权，有义务赔偿其不法行为所造成的损害。两国就赔偿金额磋商失败后，请求法院裁判赔偿问题。双方的主要分歧在于生态环境损害的量化和计算方法。法院基于损害赔偿的一般国际法原则，明确指出生态环境损害具有可赔偿性，界定了生态环境损害的赔偿范围，确定了生态环境损害的估值方法。本案是国际法院裁判的第一起关于生态环境损害赔偿的案件。法院对于生态系统服务方法、生态系统服务替代成本、修正分析法、整体性评估等生态环境损害赔偿计算方法的解释和适用，是对生态环境损害量化这一问题的有益探索，对于将来的生态环境损害求偿案件亦有指导意义和参考价值。

[关键词]

边界河流，领土主权，生态环境损害赔偿，国际义务，国际不法行为，充分救济，全面救济，举证责任，湿地保护，生物多样性，损害评估，生态系统服务，生境等价分析，整体性评估，修正分析，环境产品和服务

一、哥斯达黎加和尼加拉瓜河流生态环境损害争端的产生与发展

哥斯达黎加和尼加拉瓜地处中美洲，两国毗邻而居，拥有一条东西走向、长达 309 千米的边界线。圣胡安河（San Juan River）发源于尼加拉瓜湖，自西向东流经哥、尼两国边界后注入加勒比海，全长约 205 千米。

19 世纪以来，哥、尼两国围绕该河流的边界、航行权、利用和保护等事宜

¹ Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) Compensation Owed by the Republic of Nicaragua to the Republic of Costa Rica, Judgment, I.C.J. Reports 2018.

纷争不断。1858 年签署的《边界条约》²沿圣胡安河的右岸确定了两国的边界，规定除靠近哥斯达黎加岸边的部分外，尼加拉瓜对圣胡安河水域拥有领土主权，哥斯达黎加享有以商业为目的的自由航行权。此后，因尼加拉瓜多次质疑《边界条约》的效力，两国于 1886 年同意将该条约的效力问题提交仲裁。美国总统格罗弗·克利夫兰（Grover Cleveland）于 1888 年作出裁决，确认了 1858 年《边界条约》的有效性。³

2005 年，哥斯达黎加将两国有关圣胡安河上的航行权利及相关权利的争端提交至国际法院，指控尼加拉瓜违反 1858 年《边界条约》第 VI 条的规定，对哥斯达黎加在圣胡安河上所享有的航行权施加了诸多限制。国际法院于 2009 年作出判决，澄清了哥斯达黎加所享有的航行权及尼加拉瓜行使航行管制权的范围。

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本案所涉争端始于 2010 年 10 月 18 日，尼加拉瓜为了提高圣胡安河的通航能力对河道进行疏浚，在波蒂略岛（Isla Portillos）⁵北部进行施工，开凿了一条连接圣胡安河与港头泻湖（Harbor Head Lagoon）的水道。对此，哥方认为尼加拉瓜在哥斯达黎加境内人为开凿了一条水道，而尼方认为其仅仅是疏通了本国境内一条现有的水道。尼加拉瓜还派驻军队和其他人员占据该区域。

2010 年 11 月 18 日，哥斯达黎加将争端诉至国际法院，指控尼加拉瓜军队侵占哥斯达黎加的领土，在侵占的领土上非法开凿水道和疏浚圣胡安河，并对哥斯达黎加境内受保护的雨林和湿地造成严重损害等。同日，哥斯达黎加向法院提出临时措施请求。

2011 年 3 月 8 日，法院发布临时措施命令，指示双方当事国的义务，其中包括双方应避免采取任何可能恶化或扩大争端的行动。⁶ 此外，法院将本案的“争

² Treaty of Territorial Limits between Costa Rica and Nicaragua, signed at San José, 15 April 1858.

³ Award in regard to the validity of the Treaty of Limits between Costa Rica and Nicaragua of 15 July 1858, United Nations, Reports of International Arbitral Awards (RIAA), Vol. XXVIII, pp. 189-236.

⁴ *Dispute regarding Navigational and Related Rights* (Costa Rica v. Nicaragua), Judgment, I.C.J. Reports 2009, p. 213.

⁵ 科罗拉多河和圣胡安河下游之间的一块大约 150 平方公里的区域被称为卡莱罗岛（Isla Calero），卡莱罗岛内一块约 17 平方公里的区域被哥方称为波蒂略岛（Isla Portillos），被尼方称为港头（Harbor Head）。波蒂略岛位于哥尼两国边境的最东段，圣胡安河的入海口。

⁶ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v. Nicaragua), Provisional Measures, Order of 8 March 2011, I.C.J. Reports 2011 (I),

议领土”界定为“波蒂略岛北部，即介于 2010 年争议水道的右岸、圣胡安河右岸直到加勒比海河口与港头泻湖之间的面积约 3 平方公里的湿地”。⁷

2011 年 12 月 22 日，尼加拉瓜提出反诉，指控哥斯达黎加沿圣胡安河在两国边境地区修筑道路的工程侵犯尼加拉瓜主权并对其领土造成重大生态环境损害。2013 年 4 月 17 日，法院决定将两案（哥斯达黎加诉尼加拉瓜案与尼加拉瓜诉哥斯达黎加案）的诉讼程序合并。2013 年 11 月 22 日，法院重申 2011 年临时措施并发布新的临时措施命令。法院发现，在 2011 年临时措施命令发布之后，尼加拉瓜在争议领土上又开凿了两条新的水道并设立了一个军事营地。⁸

2015 年 12 月 16 日，法院对合并后的两案作出判决，判定尼加拉瓜 2010 年开凿的水道右岸不构成两国之间的边界，争议领土的主权属于哥斯达黎加。尼加拉瓜开凿三条水道并在哥斯达黎加领土上建立军事存在的行为侵犯了哥斯达黎加的领土主权，也违反了 2011 年临时措施命令所规定的义务。⁹ 法院指出，尼加拉瓜侵犯哥斯达黎加领土主权的行足以证明哥斯达黎加遭受了非物质损害，但哥斯达黎加仅有权获得尼加拉瓜违反国际义务所造成的物质损害赔偿，且该义务须为法院判定的尼加拉瓜应担负的义务。关于哥斯达黎加遭受的相关物质损害及应获得的赔偿问题，若双方自判决之日起 12 个月内无法达成协议，应任何一方的请求，法院可在单独的诉讼程序中进行评估。法院将根据仅限于此问题的进一步书面诉状确定赔偿金额。¹⁰

2017 年 1 月 16 日，哥斯达黎加表示双方未能就赔偿金额达成一致，请求法院对此作出判定。哥斯达黎加的求偿范围包括两个部分：（1）尼加拉瓜修建 2010

pp. 27–28, para. 86.

⁷ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v. Nicaragua), Provisional Measures, Order of 8 March 2011, I.C.J. Reports 2011 (I), p. 19, para. 55.

⁸ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v. Nicaragua); *Construction of a Road in Costa Rica along the San Juan River* (Nicaragua v. Costa Rica), Provisional Measures, Order of 22 November 2013, I.C.J. Reports 2013, p. 354.

⁹ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v. Nicaragua) and *Construction of a Road in Costa Rica along the San Juan River* (Nicaragua v. Costa Rica), Judgment, I.C.J. Reports 2015, p. 740, para. 229.

¹⁰ *Certain Activities Carried Out by Nicaragua in the Border Area* (Costa Rica v. Nicaragua) and *Construction of a Road in Costa Rica along the San Juan River* (Nicaragua v. Costa Rica), Judgment, I.C.J. Reports 2015, pp. 717–718, paras. 139 and 142.

年水道、2013 年东部水道造成的可量化的生态环境损害；（2）尼加拉瓜不法行为导致的成本和费用，包括监控和补救上述生态环境损害所产生的费用。¹¹ 尼加拉瓜则主张，哥斯达黎加仅有权获得物质损害赔偿，即对国家财产或其他国家利益造成的且能够以货币估值的损害。此外，尼加拉瓜认为 2015 年判决已从事项和归因方面将赔偿的范围限定为经法院认定的不法行为所导致的损失或费用。¹²

二、关于损害赔偿的一般国际法原则

在裁断尼加拉瓜应对哥斯达黎加进行赔偿的问题之前，法院首先回顾了国际法上关于损害赔偿的相关原则。

首先，法院强调，“违反国际义务即应承担充分救济的义务”是国际法上一项行之已久的原则。常设国际法院曾在判决中明确指出：

“国际实践，尤其是国际仲裁法庭的裁决中，似乎已经确立了这样一项关于不法行为的基本原则：救济必须尽可能地消除不法行为所造成的全部后果，并尽可能使状况恢复至该行为没有发生之前的状态。”¹³

接着，法院指出，国际法院曾在多起案件中承认了全面救济原则 (principle of full reparation)，即，不法行为的实施者应全面救济不法行为所造成的损害。¹⁴

法院还指出，损害赔偿是救济的适当形式之一，特别是在恢复原状客观上无法实现或者会造成不合理负担的情况下。但损害赔偿不应是惩罚性或惩戒性的。

¹⁵

本案中，当事方请求法院依据其 2015 年 12 月 16 日的判决确定尼加拉瓜不法活动造成损害的赔偿问题。为此，法庭需要查明：（1）原告诉称的各项损失是否存在以及以何种程度存在；（2）各项损失与被告不法行为之间是否存在足够直接和确定的因果关系；（3）被告应当赔偿的金额。¹⁶

¹¹ Judgment, p. 13, para. 36.

¹² Judgment, p. 13, para. 37.

¹³ *Factory at Chorzów, Merits*, 1928, P.C.I.J., Series A, No. 17, p. 47; see also *Avena and Other Mexican Nationals (Mexico v. United States of America)*, Judgment, I.C.J. Reports 2004 (I), p. 59, para. 119.

¹⁴ Judgment, p. 12, para. 30.

¹⁵ Judgment, p. 12, para. 31.

¹⁶ Judgment, p. 12, para. 32.

关于举证责任，法院认为举证义务的一般原则是“谁主张谁举证”。但在特定情况下，可以灵活适用该原则，例如，在某些情形下，被告可能具有证明某些事实更有利的条件。¹⁷

三、生态环境损害的可赔偿性

法院特别强调，在生态环境损害案件中，损害的存在和因果关系的证明过程可能会出现一些特殊问题，例如，生态环境损害可能由多个并存的原因导致，或者科学发展的现状可能尚不足以确定不法行为与损害之间的因果关系。这些问题必须依据案件事实以及当事方向法院提交的证据来判断。最终，应当由法院判定不法行为与损害结果之间是否存在足够的因果关系。¹⁸

关于损害赔偿的依据，虽然此前国际法院从未作出关于生态环境损害赔偿的判决，但法院认为生态环境损害赔偿符合国际法上关于“国际不法行为之结果”的原则，包括全面救济原则。因此，法院认为生态环境损害应是可赔偿的，赔偿范围包括不法行为造成的生态环境损害以及受损国因损害而产生的费用。双方对此无异议。¹⁹

法院指出，缺乏确定物质损害程度的充分证据，并不必然影响法庭作出损害赔偿的判决。例如，在迪亚洛案(Case concerning Ahmadou Sadio Diallo)中，法院基于公平的考虑确定了赔偿金额。²⁰ 在特莱尔冶炼厂仲裁案(Trail Smelter Arbitration)中，仲裁庭援引了美国最高法院的判例，并指出：

“在某项侵权行为因其性质导致无法确定损失数额的情况下，如果因此而拒绝给予受害者任何救济，并使违法者免于对其行为做出任何补救，这是对基本的正义原则的曲解。在这种情况下，虽然并不能完全基于猜测来确定赔偿金额，但只要有证据证明赔偿数额在公正合理推断的范围内就够了，即使有关结果仅是一个近似值。”²¹

¹⁷ Judgment, p. 12, para. 33.

¹⁸ Judgment, p. 13, para. 34.

¹⁹ Judgment, p. 14, para. 41.

²⁰ See *Ahmadou Sadio Diallo* (Republic of Guinea v. Democratic Republic of the Congo), Compensation, Judgment, I.C.J. Reports 2012 (I), p. 337, para. 33.

²¹ *Trail Smelter case* (United States, Canada), 16 April 1938 and 11 March 1941, United Nations, Reports of International Arbitral Awards (RIAA), Vol. III, p. 1920.

关于损害赔偿的范围，法院认为，对生态环境造成的损害本身以及生态环境损害所导致的环境提供产品和服务的能力的损害或丧失，均属于国际法上生态环境损害可赔偿的范围。生态环境损害赔偿可以包括对环境恢复期间环境提供产品和服务能力受损或丧失的补偿，以及恢复受损环境的费用。²²

法院注意到：

“恢复受损环境的费用弥补了环境自身的恢复能力未必能够将环境恢复原状的不足。在环境的自然恢复能力不足的情况下，有必要在可能的范围内采取积极措施，以使环境恢复到受损前的状态。”²³

四、生态环境损害赔偿的计算方法

（一）哥斯达黎加的主张

首先，哥斯达黎加承认，生态环境损害的评估方法并非单一的、不变的，国际社会和国家曾采用过多种方法，而适当的生态环境损害估值方法应取决于损害的性质、复杂性和同质性。

在本案中，哥方采用了哥斯达黎加非政府组织新热带基金会（Fundación Neotrópica）出具的专家报告中的意见，主张最恰当的生态环境损害计算方法是“生态系统服务方法”（ecosystem services approach），也称为“环境服务框架”（environmental services framework）。哥方声称，生态系统服务方法是国际上公认的最新的生态环境损害评估方法，并且它也适用于被尼加拉瓜的活动所损害的受《拉姆萨尔公约》保护的湿地。

根据生态系统服务方法，生态环境价值包括可交易的和不可交易的产品和服务。可交易的产品和服务，如木材，具有“直接使用价值”（direct use value）；而不可交易的产品和服务，如防洪或气体调节，则具有“间接使用价值”（indirect use value）。哥方认为，生态环境损害的评估必须同时考虑环境产品和服务的直接和间接使用价值，以便准确反映生态环境价值。

哥方声称，生态系统服务方法得到了国际和国家实践的支持。首先，联合国环境规划署于 2010 年通过了一份《关于有害环境活动所造成损害之责任、应对

²² Judgment, p. 14, para. 42.

²³ Judgment, p. 15, para. 43.

行动和赔偿的国内法制订准则》（以下简称“UNEP 准则”）。²⁴

UNEP 准则旨在突出各国在选择起草关于环境损害活动的责任、应对行动和赔偿的国内法时必须解决的核心问题，讨论了可能纳入此类国内法的关键要素，并提供了具体的文字表述，以备立法者参考。该准则将“环境损害”一词定义为：

“（a）在经由公共主管部门认可的、科学上已确立的、并顾及到其他任何人为造成的变化和自然变化的基准下，对环境产生的可测量的不利或负面影响；

（b）根据以下因素确定的对环境产生的重大不利或负面影响：

.....

（3）环境提供产品和服务的能力的永久性或暂时性减损或丧失；.....”²⁵

依据 UNEP 准则，哥斯达黎加认为生态环境损害可基于“环境提供产品和服务的能力的减损或丧失”等因素来计算。

其次，《生物多样性公约》缔约方大会第 XII/14 号决议援引了 UNEP 准则，建议各成员方酌情考虑该准则的内容。²⁶ 此外，第 XII/14 号决议还建议各成员方考虑一份关于生物多样性损害和生物多样性损害的估值和恢复方法的技术性信息综合报告，该报告指出，“责任与救济规则也可以考虑生态系统提供实际或潜在的产品和服务的能力的丧失”。²⁷

再次，部分国家在关于生态环境损害的国内立法中采用了生态系统服务方法，例如，哥斯达黎加和厄瓜多尔近年来的国内环境法实践对该方法有所体现。

最后，哥方指出，《拉姆萨尔咨询工作组第 69 号报告》²⁸在评估 2010 年争议

²⁴ Guidelines for the Development of Domestic Legislation on Liability, Response Action and Compensation for Damage Caused by Activities Dangerous to the Environment, adopted by the Governing Council of the United Nations Environment Programme in decision SS.XI/5, part B of 26 February 2010.

²⁵ Guidelines for the Development of Domestic Legislation on Liability, Response Action and Compensation for Damage Caused by Activities Dangerous to the Environment, p. 3.

²⁶ Decision XII/14. Liability and redress in the context of paragraph 2 of Article 14 of the Convention, UNEP/CBD/COP/DEC/XII/14, 17 October 2014, p. 2.

²⁷ Synthesis report on technical information relating to damage to biological diversity and approaches to valuation and restoration of damage to biological diversity, as well as information on national/domestic measures and experiences, UNEP/CBD/COP/9/20/Add.1, 20 March 2008, p. 3, para. 14.

²⁸ Ramsar Advisory Mission Report N. 69: North-eastern Caribbean Wetland of

水道造成的生态环境损害时采用了生态系统服务方法。

为了使尼加拉瓜对环境产品和服务造成的损害货币化，哥斯达黎加以“价值转移方法”（value transfer approach）计算大多数所涉环境产品和服务的经济价值。价值转移方法研究一个具有相似条件的生态系统，通过参考其价值来确定受损生态环境的货币价值。但当能够获得损害价值的的数据时，便可采用直接估值方法。

哥方认为，尼方采用的方法与联合国赔偿委员会（UNCC）²⁹在处理环境损害求偿案件中所采用的方法相同。但是，UNCC 处理的环境损害求偿与本案的争议标的存在根本区别。此外，自 UNCC2005 年处理完环境损害求偿之后，关于生态环境损害计算方法的国际实践已不断演变，新的计算方法，如生态系统服务方法，能够“评估全面的环境损害和可能长期持续存在的环境损害”。³⁰

（二）尼加拉瓜的主张

尼方认为，哥斯达黎加有权获得补偿用以替代受损区域恢复期间已丧失或可能会丧失的环境服务。尼加拉瓜将这种方法称之为“生态系统服务替代成本”（ecosystem service replacement cost）或“替代成本”（replacement costs）。这种方法参照保护一个同等区域的费用来计算生态环境损害赔偿，直至受损区域提供的服务得到恢复。

尼方认为此方法是自然资源损害评估的标准方法，也是 UNCC 在评估环境损害求偿时所遵循的方法之一。针对哥方主张，尼方反驳称，这一方法并未被较新的方法取代。

UNCC 处理的环境损害求偿范围包括因伊拉克非法入侵并占领科威特所造成的直接环境损害和自然资源枯竭。³¹ UNCC 共审理了 168 项环境损害求偿，索赔总额高达 850 亿美元。最终，伊朗、约旦、科威特和沙特阿拉伯等国获赔共计约

International Importance (Humedal Caribe Noreste), Costa Rica. Gland, Suiza: Ramsar Convention Secretariat, 2010.

²⁹ 联合国赔偿委员会创建于 1991 年，负责处理索赔和支付 1990 至 1991 年海湾战争期间因伊拉克非法入侵和占领科威特而直接遭受的损失。

³⁰ Judgment, p. 16, para. 48.

³¹ Decision taken by the Governing Council of the United Nations Compensation Commission during its third session, at the 18th meeting, held on 28 November 1991, as revised at the 24th meeting held on 16 March 1992, S/AC.26/1991/7/Rev.1, 17 March 1992, pp. 7-8, para. 35.

53 亿美元。³²

UNCC 在《专员小组就第五批“F4”类索赔提出的报告和建议》中指出,国际法并未针对国际不法行为的损害赔偿规定任何具体的和排他性的计量方法。然而,即使没有关于损害评估方法的准确规则 and 规定,法院和法庭也有权并应当进行损害评估。³³

UNCC 在审理暂时性自然资源丧失的索赔中,采用“生境等价分析法”(Habitat Equivalency Analysis)来确定生态服务损失补偿修复措施的性质和程度。生境等价分析法通常用于量化石油泄漏和污染物排放所造成的生态服务损失,其主要理念是根据损害程度确定一个相当的恢复规模,一旦适当的恢复规模得以确定,便可以基于恢复性工程的相关成本来估算损害赔偿的金额。

在石油泄漏造成沙特阿拉伯沿海陆地环境受损的求偿中,UNCC 指出,虽然沙特阿拉伯高估了周边地区的受损程度,但采用生境等价分析来量化其损失这一做法是恰当的。³⁴ 在另一项石油泄漏造成潮间带海岸线栖息地受损求偿中,UNCC 采用生境等价分析法来评估沙特阿拉伯潮间带受损的规模。³⁵ 约旦在其提出的自然资源损失索赔中,采用生境等价分析法来计算牧场和野生动物保护区的受损面积。UNCC 原则上接受此种方法,但由于约旦的土地储备面积不足以实施恢复性工程,因而改为利用合作管理牧场工程的成本来估算损害赔偿的数额。³⁶ 在审理科威特提出的索赔项之一时,UNCC 认为科威特夸大了其陆地自然资源的受损程度,最终并未支持其请求,但却肯定了生境等价分析法作为估算损害赔偿方法的

³² Peter H. Sand, *Compensation for Environmental Damage from the 1991 Gulf War*, 35 *Envtl. Pol' y & L.* 244, 245 (2005).

³³ Report and Recommendations Made by the Panel of Commissioners Concerning the Fifth Instalment of “F4” Claims, S/AC.26/2005/10, 30 June 2005, p. 24, para. 80.

³⁴ See the terrestrial resources unit of Saudi Arabia's claim No. 5000463; Report and Recommendations Made by the Panel of Commissioners Concerning the Fifth Instalment of “F4” Claims, p. 100, para. 606. Saudi Arabia uses Habitat Equivalency Analysis (“HEA”) to quantify its losses. In the view of the Panel, while the use of HEA for this purpose is appropriate, some of Saudi Arabia's assumptions and inputs used regarding intensity of damage and recovery periods are inappropriate. In particular, the Panel finds that Saudi Arabia has overestimated the intensity of damage in peripheral areas.

³⁵ See the intertidal shoreline habitats unit of Saudi Arabia's claim No. 5000463; Report and Recommendations Made by the Panel of Commissioners Concerning the Fifth Instalment of “F4” Claims, p. 104, para. 632.

³⁶ See the terrestrial resources unit of Jordan's claim No. 5000304; Report and Recommendations Made by the Panel of Commissioners Concerning the Fifth Instalment of “F4” Claims, pp. 64-65, paras. 353-366.

适当性。³⁷

尼加拉瓜反驳称，哥斯达黎加采用的方法是一种“效益转移方法”(benefits transfer approach)，通过参考其它地区在其它情形下环境服务的价值来确定受损环境服务的价值，这种方法是不可靠的，在实践中也未得到广泛的采用。此外，UNCC 在伊朗提出的陆地资源损害求偿中也曾拒绝采用价值转移方法（效益转移方法最简单的形式之一）来量化环境损失。³⁸

（三）法院的判决

国际法院指出，双方主张的生态环境损害评估方法均有国家和国际机构采用，与本案具有相关性。但是，国家或国际机构并未将它们作为评估生态环境损害的唯一手段，而且它们的适用范围也不限于此，例如在公共政策背景下进行环境项目和方案的成本/效益分析也会用到这些方法。³⁹ 因此，法院没有在二者之间做出选择，或将二者之一专门用于评估哥斯达黎加受保护湿地遭受的损失。法院注意到：

“两种方法各自都为环境损害评估提供了一定的合理依据，法院会将它们一并纳入考量。采取这种路径是由两个因素决定的：其一，国际法尚未规定任何具体的环境损害赔偿评估方法；其二，法院认为有必要考虑每个案件的具体情况和特点。”⁴⁰

因此，法院将遵循前文所述的原则和规则，评估恢复受损环境所需的费用，以及在环境恢复之前环境提供产品和服务能力的减损或丧失所对应的价值。

五、生态环境损害的评估与赔偿金额的确定

本案中，受尼加拉瓜不法活动影响地区的面积为 6.19 公顷。哥斯达黎加主张共有 22 类环境产品和服务因尼加拉瓜的不法行为而受损，但它仅对其中六类

³⁷ See the terrestrial resources unit of Kuwait's claim No. 5000460; Report and Recommendations Made by the Panel of Commissioners Concerning the Fifth Instalment of "F4" Claims, p. 74, para. 424.

³⁸ See the terrestrial resources damaged by refugees unit of Iran's claim No. 5000288; Report and Recommendations Made by the Panel of Commissioners Concerning the Fifth Instalment of "F4" Claims, pp. 38-39, paras. 171-184.

³⁹ See for example UNEP, "Guidance Manual on Valuation and Accounting of Ecosystem Services for Small Island Developing States" (2014), p. 4.

⁴⁰ Judgment, p. 17, para. 52.

提出索赔。这六类受损的环境产品和服务分别为：（1）活立木；（2）其它原材料（纤维和能源）；（3）气体调节和空气质量；（4）减轻自然灾害；（5）土壤形成和侵蚀控制；（6）生物多样性（栖息地和繁育条件）。

法院指出，在将尼加拉瓜不法行为造成的生态环境损害货币化之前，首先应当查明损害是否存在以及损害的程度，并判断损害与尼加拉瓜的不法行为之间是否存在直接和确定的因果关系。

当事国之间就两个问题存在分歧：

“（1）某些环境产品和服务，即减轻自然灾害和土壤形成与侵蚀控制，是否受到损害；

（2）考虑到环境恢复所需时间的长短，如何对已经减损或丧失的环境产品和服务进行估值。”⁴¹

对于第一个问题，法院认为哥方未能证明受影响地区减缓自然灾害的功能因其生态特征的改变而丧失或被削弱。关于土壤形成和侵蚀控制，尼加拉瓜承认它从 2010 年水道和 2013 年东部水道地区清除了约 9500 立方米的土壤。但证据显示，水道已重新填满土壤，并且植被已得到大量恢复。虽然此前移除土壤的质量优于后来重填的土壤，但哥方未证明这一区别影响了土壤的侵蚀控制，关于这两种土壤质量的证据也不足以让法院认定哥方受到了任何损失。

对于第二个问题，证据显示，尼方为开凿水道，移除了近 300 棵树木，清理了 6.19 公顷植被。此行为对受损地区提供下列环境产品和服务的能力产生了重大影响：活立木，其它原材料（纤维和能源），气体调节与空气质量，生物多样性（栖息地和繁育条件）。然而，双方提出的估值方法均未被法院采纳。法院认为：

“应将生态系统视为一个整体，对环境恢复以前所有环境产品和服务的损失进行整体性的评估，而非单独确定每项环境产品和服务的价值”。⁴²

法院指出哥方主张的估值方法具有不可靠性。首先，哥方未提供清晰证据证明尼方实施不法行为之前该地区环境产品和服务的基准状态。再者，哥方将受损环境产品和服务的必要恢复时间统一估算为 50 年。生态系统不同组成部分的恢

⁴¹ Judgment, p. 21, para. 73.

⁴² Judgment, p. 22, para. 78.

复时间不同，给不同种类的产品和服务确定同一恢复时间是错误的。

法院继而反驳了尼方主张的每年每公顷 309 美元的计算方法。该方法主要基于哥方在其国内环境保护计划下向受损地区的土地所有人和社区支付的保护生物栖息地的奖励金，但这笔钱是为了补偿个人和群体为保护环境而付出的机会成本，并不能适当反映生态系统提供的产品和服务的价值。⁴³

除以上两种估值方法外，尼方还提出了一种替代性估值方法“修正分析法”。该方法采取了哥方主张的“生态系统服务方法”，即在四项环境产品与服务的基础上计算生态环境损害，但对具体计算方式做出了重大调整。法院指出，该方法低估了特定种类的产品和服务的价值。第一，修正分析法认为其它原材料（纤维和能源）在第一年后再也没有损失，但并无证据支持这一主张。第二，修正分析法没有充分考虑国际保护湿地内生态服务的特殊重要性。无论该地区自然恢复的状态如何，其生物多样性的丰富程度在短期内不可能达到受损之前的水平。第三，关于气体调节和空气质量服务，修正分析法将生态系统碳吸存功能的损失视为一次性的，而没有考虑未来每年的损失。

法院注意到，尼加拉瓜造成的最重大的环境损害是在开凿水道的过程中移除树木，其它生态环境损害均来源于此。因此，采取整体性评估能够反映移除树木与其它生态环境损害之间的关联，例如对其它原材料、气体调节和空气质量服务、生物多样性的损害。

再者，采取整体性评估也是由受损地区的特点决定的。该地区位于《拉姆萨尔公约》的保护湿地“东北加勒比海湿地”（Northeast Caribbean Wetland）内，这里有各种紧密关联的环境产品和服务。湿地是世界上最多样和最丰饶的生态系统之一，湿地的物理、生物和化学元素之间的互动，使其能够实现大量关键性的功能，包括支持丰富的生物多样性，调节水文状况以及滞留沉积物和污染物。

最后，整体性评估使法院可以考虑受损地区自然恢复的能力。基于以上理由，法院认为应采取整体性评估方法。法院指出，为所有受影响的环境产品和服务确定一个相同的恢复期是不现实的，虽然它们之间联系密切，但恢复至受损前的状

⁴³ Judgment, p. 22, para. 77. The Court also stated, “Compensation for environmental damage in an internationally protected wetland, however, cannot be based on the general incentives paid to particular individuals or groups to manage a habitat.”

态所需时间必然会有所不同。⁴⁴

法院再次强调前述的原则，即缺乏损害程度的确定性并不必然影响法院裁定一个近似反映环境产品和服务受损价值的赔偿数额。本案中，法院保留了尼加拉瓜“修正分析法”的部分要素，但为实现“整体性评估”的目的，对该方法计算出的赔偿总额做出了调整，以弥补该方法的缺陷。

最终，法院判决，在受损地区环境产品和服务恢复期间，哥斯达黎加应获补偿金额为 12 万美元。对于环境恢复费用，法院驳回了哥方关于“土壤替换”费用的请求，约 54 万美元，但支持了哥方关于湿地恢复措施请求，计 2,708.39 美元。

另外，法院计算了尼加拉瓜不法行为导致的成本和费用以及判决前的利息，分别为 236032.16 美元和 20150.04 美元。哥斯达黎加应获赔款合计约 38 万美元。据悉，尼加拉瓜于 2018 年 3 月 22 日致函法院，声明该国已于 2018 年 3 月 8 日一次性偿付所有赔款。

六、生态环境损害赔偿的一般国际法原则与赔偿金额的计算方法

本案是 2015 年哥斯达黎加诉尼加拉瓜在边境地区实施特定活动案后续的司法程序。在 2015 年判决的基础上，法院应当事方请求对赔偿的金额作出裁判。由于 2015 年判决已经判定尼加拉瓜违反了国际义务且应为其不法行为造成的损害承担相应的赔偿责任，本案仅解决赔偿数额的问题。因此，本案的焦点问题是如何评估尼加拉瓜不法行为所造成的生态环境损害，即，生态环境损害的量化方法。法院首先回顾了生态环境损害赔偿适用的国际法原则，继而论述了生态环境损害的可赔偿性，界定了生态环境损害的赔偿范围，最后重点厘清了适用何种生态环境损害评估方法的问题。

（一）关于生态环境损害赔偿的一般国际法原则

目前，关于跨境生态环境损害赔偿责任尚不存在普遍适用的国际公约，当事国之间也未缔结相关条约，本案所涉国际生态环境损害赔偿争端适用损害赔偿的一般国际法原则。

法院首先援引的是常设国际法院在霍茹夫工厂案（Case concerning the

⁴⁴ Judgment, p. 23, para. 82.

Factory at Chorzów) 中确立的关于国际不法行为责任的一般国际法原则, 即, 不法行为的实施者应提供充分的救济。法院强调, 救济应尽可能地消除不法行为造成的全部后果, 使状况恢复至不法行为发生前的状态。⁴⁵ 对于何为“充分形式的救济”, 国际法院在阿韦纳案 (Avena and Other Mexican Nationals Case) 中观察到:

“什么构成‘充分的救济’显然因个案的具体情况及损害的准确性质和范围而异, 因为必须从什么构成‘充分形式的救济’才与损害相适应这种角度来回答这个问题。”⁴⁶

虽然本案中法院仅讨论了金钱赔偿的问题, 但值得注意的是, 依据国际不法行为救济的习惯国际法, 对生态环境损害的救济应当优先考虑恢复原状。国际法院在乌拉圭河纸浆厂案 (Pulp Mills Case) 中指出:

“根据习惯国际法, 恢复原状是修复损害的一种方式, 它是指要恢复到不法行为发生前的状态。法院还注意到, 若恢复原状在实际上是不可能的, 或涉及的责任与恢复原状带来的利益不成比例, 救济便可采取赔偿或补偿的形式, 或者甚至同时采取两种形式”。⁴⁷

法院还强调:

“与其他救济方式一样, 恢复原状必须与受到的损害相当, 并考虑造成损害的不法行为的性质。”⁴⁸

除了国际法院, UNCC 在其环境损害求偿报告中也确认, 国际不法行为救济的一般规则是恢复已受损部分的完整性, 若不可能, 则应提供等效的替代物。总体的救济标准是对不法行为进行有效的救济。⁴⁹

在评估本案所涉生态环境损害时, 法院采用了迪亚洛案中的裁判标准, 即判断“不法行为与损害结果之间是否存在充分直接和确定的因果关系”。⁵⁰ 另外,

⁴⁵ Judgment, p. 12, para. 29.

⁴⁶ *Avena and Other Mexican Nationals* (Mexico v. United States of America), Judgment, I.C.J. Reports 2004 (I), p. 59, para. 119.

⁴⁷ *Pulp Mills on the River Uruguay* (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010 (I), pp. 103-104, para. 273.

⁴⁸ *Pulp Mills on the River Uruguay* (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010 (I), p. 104, para. 274.

⁴⁹ Report and Recommendations Made by the Panel of Commissioners Concerning the Fifth Instalment of “F4” Claims, S/AC.26/2005/10, 30 June 2005, p. 24, para. 80.

⁵⁰ *Ahmadou Sadio Diallo* (Republic of Guinea v. Democratic Republic of the Congo),

在这起人权保护案件中，国际法院基于公平的考虑确定了损害赔偿的金额。法院援引该案并指出，关于具体损失数额的证据不足并不影响法院对赔偿金额做出裁断。⁵¹ 与迪亚洛案不同的是，法院在评估本案的损害赔偿金额时并未明确适用公平原则。然而，在其他的生态环境损害赔偿案件中，不排除法院将公平原则作为一般原则的可能性。

（二）生态环境损害赔偿金额的计算方法

本案的重要意义在于，国际法院首次就跨境生态环境损害和生态系统修复的金钱赔偿问题作出判决，对于未来的生态环境损害赔偿案件具有借鉴价值。

首先，本案肯定了生态系统服务的重要价值，明确了环境提供产品和服务的能力的可赔偿性。环境产品和服务能够预防、减少和消除污染，预防环境退化，保护自然资源并防范其枯竭。法院在界定生态环境损害赔偿范围时指出，生态环境损害所导致的环境提供产品和服务的能力的受损或丧失应获得补偿。⁵²

在损害评估阶段，哥斯达黎加主张采用生态系统服务方法，将环境价值分为可交易的和不可交易的产品和服务，分别并同时考虑二者的价值以便准确衡量环境的价值。尼加拉瓜则主张采用生态系统服务替代成本计算受损地区恢复期间已丧失或可能丧失的环境服务。无论哪种方法都反映了环境提供产品和服务能力的重要性和可赔偿性。因此，法院既没有在两种方法中做出选择，也没有否定其中的一种方法，而是承认两种方法都具有可采之处，应当结合案件的具体情况和特点加以综合考量。

其次，本案观察到不同的环境要素受损后的恢复速率也不尽相同。法院在对受损的环境产品和服务进行估值时，将环境恢复所需时间的长短作为重要的影响因素来考察。哥斯达黎加主张的生态环境损害评估方法将受损生态的恢复时间统一估算为 50 年，法院反对此种做法并强调，生态系统不同要素的恢复时间不同，无法为不同种类的产品和服务确定统一的恢复时间。最终，法院采取了能够调和受损地区内部多种生态要素不同恢复能力的评估方法。

最后，也最为重要的是，本案第一次明晰了量化跨境生态环境损害赔偿的方法。法院将生态环境损害赔偿分为两部分，其一为对环境恢复期间受损环境产品

Compensation, Judgment, I.C.J. Reports 2012 (I), p. 332, para. 14.

⁵¹ Judgment, p. 13, para. 35.

⁵² Judgment, p. 14, para. 42.

和服务的补偿，其二为采取恢复措施所需的费用。争议的核心在于前者的估值方法。法院厘清了生态系统服务方法、生态系统服务替代成本、修正分析法、整体性评估等计算方法的内容以及它们在环境产品和服务受损价值评估中的适用问题。

如前所述，法院拒绝采用哥斯达黎加或尼加拉瓜提出的估值方法，而是从整个生态系统的角度对生态环境损害进行全面评估。然而，本案对于整体性评估方法存在一些尚未阐明之处。

第一，法院认为尼加拉瓜提出的修正分析法低估了某些环境产品和服务的价值，因而保留了修正分析法的某些要素，并以整体性评估的目的对其计算总额做了调整。但是，关于修正分析法中的哪些要素应做保留，如何确定这些要素的取舍标准，以及对该方法做出何种调整才能弥补其缺陷等问题，法院均没有给出解释。

第二，修正分析法采取了哥方主张的生态系统服务方法，即在四项环境产品与服务的基础上计算生态环境损害，但对具体计算方式做出了重大修正。法院指出，该方法低估了其他原材料（纤维和能源）、生物多样性、气体调节和空气质量等特定种类的产品和服务的价值。然而，法院采用的整体性评估方法是如何对上述特定种类环境产品和服务进行估值并最终确定了 12 万美元的补偿数额，判决中没有详述估算的具体标准和过程。

无论如何，本案是国际水法和国际环境法领域中具有里程碑意义的一起国际司法判决，它丰富了生态环境损害赔偿的理论和实践，也对将来的生态环境损害求偿案件具有重要的指导意义和参考价值。

COUR INTERNATIONALE DE JUSTICE

RECUEIL DES ARRÊTS,
AVIS CONSULTATIFS ET ORDONNANCES

CERTAINES ACTIVITÉS MENÉES
PAR LE NICARAGUA
DANS LA RÉGION FRONTALIÈRE

(COSTA RICA c. NICARAGUA)

INDEMNISATION DUE PAR LA RÉPUBLIQUE DU NICARAGUA
À LA RÉPUBLIQUE DU COSTA RICA

ARRÊT DU 2 FÉVRIER 2018

2018

INTERNATIONAL COURT OF JUSTICE

REPORTS OF JUDGMENTS,
ADVISORY OPINIONS AND ORDERS

CERTAIN ACTIVITIES CARRIED OUT
BY NICARAGUA
IN THE BORDER AREA

(COSTA RICA v. NICARAGUA)

COMPENSATION OWED BY THE REPUBLIC OF NICARAGUA
TO THE REPUBLIC OF COSTA RICA

JUDGMENT OF 2 FEBRUARY 2018

Mode officiel de citation :

*Certaines activités menées par le Nicaragua dans la région frontalière
(Costa Rica c. Nicaragua), indemnisation, arrêt,
C.I.J. Recueil 2018, p. 15*

Official citation :

*Certain Activities Carried Out by Nicaragua in the Border Area
(Costa Rica v. Nicaragua), Compensation, Judgment,
I.C.J. Reports 2018, p. 15*

ISSN 0074-4441
ISBN 978-92-1-157331-2

N° de vente: Sales number	1133
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2 FÉVRIER 2018

ARRÊT

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JUDGMENT

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INTERNATIONAL COURT OF JUSTICE

YEAR 2018

2 February 2018

2018
2 February
General List
No. 150CERTAIN ACTIVITIES CARRIED OUT
BY NICARAGUA
IN THE BORDER AREA

(COSTA RICA v. NICARAGUA)

COMPENSATION OWED BY THE REPUBLIC OF NICARAGUA
TO THE REPUBLIC OF COSTA RICA

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* *

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*

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*

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* *

Total compensation for costs and expenses.

* *

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* *

Total sum awarded to Costa Rica.

JUDGMENT

Present: President ABRAHAM; Vice-President YUSUF; Judges OWADA, TOMKA, BENNOUNA, CANÇADO TRINDADE, GREENWOOD, XUE, DONOGHUE, GAJA, SEBUTINDE, BHANDARI, ROBINSON, GEVORGIAN; Judges ad hoc GUILLAUME, DUGARD; Registrar COUVREUR.

In the case concerning certain activities carried out by Nicaragua in the border area,

between

the Republic of Costa Rica,
represented by

H.E. Mr. Edgar Ugalde Alvarez, Ambassador on Special Mission,
as Agent;

H.E. Mr. Sergio Ugalde, Ambassador of Costa Rica to the Kingdom of the Netherlands, member of the Permanent Court of Arbitration,
as Co-Agent,

and

the Republic of Nicaragua,
represented by

H.E. Mr. Carlos José Argüello Gómez, Ambassador of Nicaragua to the Kingdom of the Netherlands, member of the International Law Commission,
as Agent,

THE COURT,

composed as above,
after deliberation,

delivers the following Judgment:

1. By an Application filed in the Registry of the Court on 18 November 2010, the Republic of Costa Rica (hereinafter “Costa Rica”) instituted proceedings

against the Republic of Nicaragua (hereinafter “Nicaragua”) for “the incursion into, occupation of and use by Nicaragua’s army of Costa Rican territory”, as well as for “serious damage inflicted to its protected rainforests and wetlands” (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*), hereinafter referred to as the “*Costa Rica v. Nicaragua* case”).

2. By an Order dated 8 March 2011 (hereinafter referred to as the “2011 Order”), the Court indicated provisional measures addressed to both Parties in the *Costa Rica v. Nicaragua* case (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, *Provisional Measures, Order of 8 March 2011*, *I.C.J. Reports 2011 (I)*, pp. 27-28, para. 86).

3. By an Application filed in the Registry on 22 December 2011, Nicaragua instituted proceedings against Costa Rica for “violations of Nicaraguan sovereignty and major environmental damages on its territory”, resulting from the road construction works being carried out by Costa Rica in the border area between the two countries along the San Juan River (*Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*), hereinafter referred to as the “*Nicaragua v. Costa Rica* case”).

4. By two separate Orders dated 17 April 2013, the Court joined the proceedings in the *Costa Rica v. Nicaragua* and *Nicaragua v. Costa Rica* cases.

5. By an Order of 22 November 2013 (hereinafter referred to as the “2013 Order”), the Court indicated further provisional measures in the *Costa Rica v. Nicaragua* case (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*) and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, *Provisional Measures, Order of 22 November 2013*, *I.C.J. Reports 2013*, pp. 369-370, para. 59).

6. Public hearings were held in the joined cases between 14 April 2015 and 1 May 2015.

7. In its Judgment dated 16 December 2015 on the merits, issued in the joined cases, the Court found, *inter alia*, with regard to the *Costa Rica v. Nicaragua* case, that Costa Rica had sovereignty over the “disputed territory”, as defined by the Court in paragraphs 69-70 (*I.C.J. Reports 2015 (II)*, p. 740, para. 229, subpara. (1) of the operative part), and that, by excavating three *caños* and establishing a military presence on Costa Rican territory, Nicaragua had violated the territorial sovereignty of Costa Rica (*ibid.*, subpara. (2) of the operative part). The Court also found that, by excavating two *caños* in 2013 and establishing a military presence in the disputed territory, Nicaragua had breached the obligations incumbent upon it under the 2011 Order (*ibid.*, subpara. (3) of the operative part).

8. In the same Judgment, the Court found that Nicaragua had “the obligation to compensate Costa Rica for material damages caused by Nicaragua’s unlawful activities on Costa Rican territory” (*ibid.*, p. 740, para. 229, subpara. (5) (a) of the operative part).

9. With respect to the question of compensation owed by Nicaragua to Costa Rica, the Court decided that “failing agreement between the Parties on this matter within 12 months from the date of [the] Judgment, [this] question . . . [would], at the request of one of the Parties, be settled by the Court” (*ibid.*, p. 741, para. 229, subpara. (5) (b) of the operative part).

10. Paragraph 142 of the same Judgment provided that the Court would, in such a case, determine the amount of compensation on the basis of further written pleadings limited to this issue.

11. By means of a letter dated 16 January 2017, the Co-Agent of Costa Rica, referring to paragraph 229, subparagraph (5) (b) of the operative part of the Court's Judgment of 16 December 2015, noted that "[r]egrettably, the Parties ha[d] been unable to agree on the compensation due to Costa Rica for material damages caused by Nicaragua's unlawful activities" as determined by the Court in the *Costa Rica v. Nicaragua* case. The Government of Costa Rica accordingly requested the Court "to settle the question of the compensation" due to Costa Rica.

12. At a meeting held by the President of the Court with the representatives of the Parties on 26 January 2017, pursuant to Article 31 of the Rules of Court, the latter expressed the views of their respective Governments regarding the time-limits required in order to prepare written pleadings. The Co-Agent of Costa Rica indicated that his Government wished to have at its disposal a period of two months for the preparation of its Memorial on the question of compensation. The Agent of Nicaragua stated that his Government would agree to a period of two months for the preparation of its Counter-Memorial on the same question.

13. Having ascertained the views of the Parties, and taking into account their agreement, by an Order of 2 February 2017, the Court fixed 3 April 2017 and 2 June 2017 as the respective time-limits for the filing of a Memorial by Costa Rica and a Counter-Memorial by Nicaragua on the question of compensation due to Costa Rica.

14. The Memorial and Counter-Memorial on compensation were filed within the time-limits thus fixed.

15. By a letter dated 20 June 2017, Costa Rica stated that, in its Counter-Memorial, Nicaragua had introduced evidence, and raised a number of arguments, in particular in respect of Costa Rica's expert evidence, which Costa Rica "ha[d] not yet had [the] opportunity to address". In the same letter, Costa Rica, *inter alia*, contested the methodology used by Nicaragua for the assessment of environmental harm and requested the Court that it be given an opportunity to respond by way of a short reply.

16. By a letter dated 23 June 2017, Nicaragua objected to Costa Rica's request and asked the Court "to proceed and assess the relevant material damage and the amount of compensation based on the evidence that the Parties have provided in their Memorial and Counter-Memorial".

17. The Court, noting that the Parties held different views as to the methodology for the assessment of environmental harm, considered it necessary for them to address that issue in a brief second round of written pleadings.

18. By an Order dated 18 July 2017, the President of the Court accordingly authorized the submission of a Reply by Costa Rica and a Rejoinder by Nicaragua on the sole question of the methodology adopted in the expert reports presented by the Parties in the Memorial and Counter-Memorial, respectively, on the question of compensation. By the same Order, the President fixed 8 August 2017 and 29 August 2017 as the respective time-limits for the filing of a Reply by Costa Rica and a Rejoinder by Nicaragua.

19. The Reply and Rejoinder were filed within the time-limits thus fixed.

20. In the written proceedings relating to compensation, the following submissions were presented by the Parties:

On behalf of the Government of the Republic of Costa Rica,

in the Memorial:

“1. Costa Rica respectfully requests the Court to order Nicaragua to pay immediately to Costa Rica:

- (a) US\$6,708,776.96; and
- (b) pre-judgment interest in a total amount of US\$522,733.19 until 3 April 2017, which amount should be updated to reflect the date of the Court’s Judgment on this claim for compensation.

2. In the event that Nicaragua does not make immediate payment, Costa Rica respectfully requests the Court to order Nicaragua to pay post-judgment interest at an annual rate of 6 per cent.”

in the Reply:

“1. Costa Rica respectfully requests the Court to reject Nicaragua’s submissions and to order Nicaragua to pay immediately to Costa Rica:

- (a) US\$6,711,685.26; and
- (b) pre-judgment interest in a total amount of US\$501,997.28 until 3 April 2017, which amount should be updated to reflect the date of the Court’s Judgment on this claim for compensation.

2. In the event that Nicaragua does not make immediate payment, Costa Rica respectfully requests the Court to order Nicaragua to pay post-judgment interest at an annual rate of 6 per cent.”

On behalf of the Government of the Republic of Nicaragua,

in the Counter-Memorial:

“For the reasons given herein, the Republic of Nicaragua requests the Court to adjudge and declare that the Republic of Costa Rica is not entitled to more than \$188,504 for material damages caused by Nicaragua’s wrongful acts.”

in the Rejoinder:

“For the reasons given herein, the Republic of Nicaragua requests the Court to adjudge and declare that the Republic of Costa Rica is not entitled to more than \$188,504 for material damages caused by the actions of Nicaragua in the Disputed Area that the Court adjudged unlawful.”

* * *

I. INTRODUCTORY OBSERVATIONS

21. In view of the lack of agreement between the Parties and of the request made by Costa Rica, it falls to the Court to determine the amount of compensation to be awarded to Costa Rica for material damage caused by Nicaragua’s unlawful activities on Costa Rican territory, pursuant to

the findings of the Court set out in its Judgment of 16 December 2015. The Court begins by recalling certain facts on which it based that Judgment.

22. The issues before the Court have their origin in a territorial dispute between Costa Rica and Nicaragua over an area abutting the easternmost stretch of the Parties' mutual land boundary. This area, referred to by the Court as the "disputed territory", was defined by the Court as follows: "the northern part of Isla Portillos, that is to say, the area of wetland of some 3 square kilometres between the right bank of the [2010] disputed *caño*, the right bank of the San Juan River up to its mouth at the Caribbean Sea and the Harbor Head Lagoon" (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, *Provisional Measures, Order of 8 March 2011, I.C.J. Reports 2011 (I)*, p. 19, para. 55).

23. On 18 October 2010, Nicaragua started dredging the San Juan River in order to improve its navigability. It also carried out works in the northern part of Isla Portillos, excavating a channel ("*caño*") on the disputed territory between the San Juan River and Harbor Head Lagoon (hereinafter referred to as the "2010 *caño*"). Nicaragua also sent some military units and other personnel to that area (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, *Judgment, I.C.J. Reports 2015 (II)*, p. 694, para. 63; p. 703, paras. 92-93).

24. By its 2011 Order, the Court indicated the following provisional measures:

- "(1) Each Party shall refrain from sending to, or maintaining in the disputed territory, including the *caño*, any personnel, whether civilian, police or security;
- (2) Notwithstanding point (1) above, Costa Rica may dispatch civilian personnel charged with the protection of the environment to the disputed territory, including the *caño*, but only in so far as it is necessary to avoid irreparable prejudice being caused to the part of the wetland where that territory is situated; Costa Rica shall consult with the Secretariat of the Ramsar Convention in regard to these actions, give Nicaragua prior notice of them and use its best endeavours to find common solutions with Nicaragua in this respect;
- (3) Each Party shall refrain from any action which might aggravate or extend the dispute before the Court or make it more difficult to resolve;
- (4) Each Party shall inform the Court as to its compliance with the above provisional measures." (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, *Provisional Measures, Order of 8 March 2011, I.C.J. Reports 2011 (I)*, pp. 27-28, para. 86.)

25. In its 2013 Order, the Court found that two new *caños* had been constructed by Nicaragua in the disputed territory (hereinafter referred to as the “2013 *caños*”) (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, *Provisional Measures, Order of 22 November 2013*, *I.C.J. Reports 2013*, p. 364, para. 44). Both Costa Rica and Nicaragua acknowledged that the excavation of the 2013 *caños* took place after the 2011 Order on provisional measures had been adopted, that this activity was attributable to Nicaragua, and that a military encampment had been installed on the disputed territory as defined by the Court. Nicaragua also acknowledged that the excavation of the *caños* represented an infringement of its obligations under the 2011 Order (*ibid.*, *Judgment, I.C.J. Reports 2015 (II)*, p. 713, para. 125).

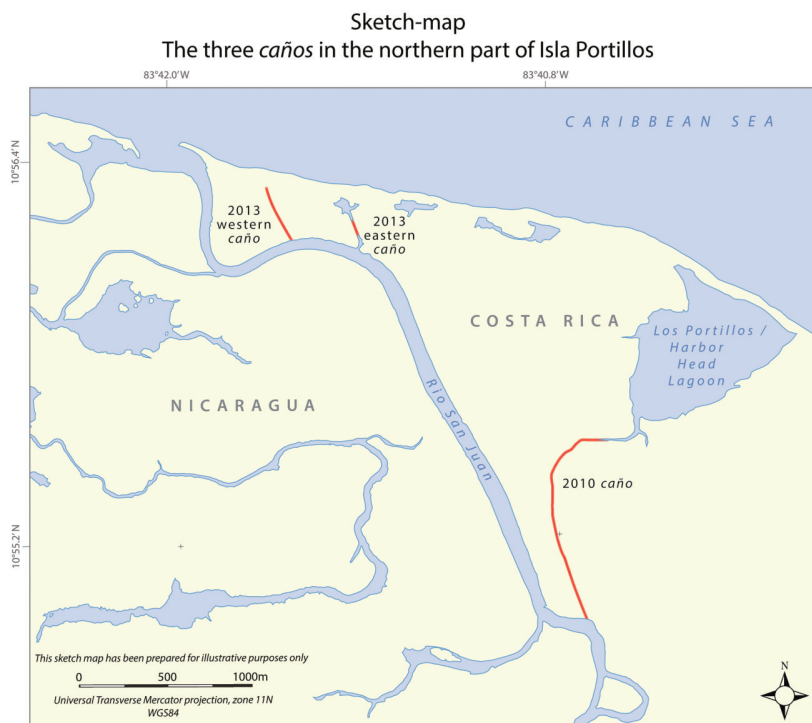
26. In its 2013 Order, the Court stated that

“[f]ollowing consultation with the Secretariat of the Ramsar Convention [Convention on Wetlands of International Importance especially as Waterfowl Habitat, signed at Ramsar on 2 February 1971 (hereinafter the ‘Ramsar Convention’)] and after giving Nicaragua prior notice, Costa Rica may take appropriate measures related to the two new *caños*, to the extent necessary to prevent irreparable prejudice to the environment of the disputed territory” (*ibid.*, *Provisional Measures, Order of 22 November 2013, I.C.J. Reports 2013*, p. 370, para. 59, subpara. (2) (E)).

After consultation with the Secretariat, Costa Rica constructed, during a short period in late March and early April 2015, a dyke across the eastern of the two 2013 *caños* (hereinafter referred to as the “2013 eastern *caño*”).

27. In its Judgment of 16 December 2015, the Court found that sovereignty over the “disputed territory” belonged to Costa Rica and that consequently Nicaragua’s activities, including the excavation of three *caños* and the establishment of a military presence in that territory, were in breach of Costa Rica’s sovereignty. Nicaragua therefore incurred the obligation to make reparation for the damage caused by its unlawful activities (*I.C.J. Reports 2015 (II)*, p. 703, para. 93). The Court found that its declaration that Nicaragua had breached Costa Rica’s territorial sovereignty provided adequate satisfaction for the non-material damage suffered. However, it held that Costa Rica was entitled to receive compensation for material damage caused by those breaches of obligations by Nicaragua that had been ascertained by the Court (*ibid.*, pp. 717-718, paras. 139 and 142). The present Judgment determines the amount of compensation due to Costa Rica.

28. The sketch-map below shows the approximate locations of the three *caños* in the northern part of Isla Portillos as excavated in 2010 and 2013.



II. LEGAL PRINCIPLES APPLICABLE TO THE COMPENSATION DUE TO COSTA RICA

29. Before turning to the consideration of the issue of compensation due in the present case, the Court will recall some of the principles relevant to its determination. It is a well-established principle of international law that “the breach of an engagement involves an obligation to make reparation in an adequate form” (*Factory at Chorzów, Jurisdiction, Judgment No. 8, 1927, P.C.I.J., Series A, No. 9*, p. 21). The Permanent Court elaborated on this point as follows:

“The essential principle contained in the actual notion of an illegal act — a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals — is that reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed.” (*Factory at Chorzów, Merits, Judgment No. 13, 1928, P.C.I.J., Series A, No. 17*, p. 47; see also *Avena and Other Mexican Nationals (Mexico v. United States of America)*, *Judgment, I.C.J. Reports 2004 (I)*, p. 59, para. 119.)

30. The obligation to make full reparation for the damage caused by a wrongful act has been recognized by the Court in other cases (see for example, *Ahmadou Sadio Diallo (Republic of Guinea v. Democratic Republic of the Congo)*, *Merits, Judgment, I.C.J. Reports 2010 (II)*, p. 691, para. 161; *Avena and Other Mexican Nationals (Mexico v. United States of America)*, *Judgment, I.C.J. Reports 2004 (I)*, p. 59, para. 119; *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, *Judgment, I.C.J. Reports 1997*, p. 80, para. 150).

31. The Court has held that compensation may be an appropriate form of reparation, particularly in those cases where restitution is materially impossible or unduly burdensome (*Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, *Judgment, I.C.J. Reports 2010 (I)*, pp. 103-104, para. 273). Compensation should not, however, have a punitive or exemplary character.

32. In the present case, the Court has been asked to determine compensation for the damage caused by Nicaragua's unlawful activities, in accordance with its Judgment of 16 December 2015 (see paragraph 27 above). In order to award compensation, the Court will ascertain whether, and to what extent, each of the various heads of damage claimed by the Applicant can be established and whether they are the consequence of wrongful conduct by the Respondent, by determining "whether there is a sufficiently direct and certain causal nexus between the wrongful act . . . and the injury suffered by the Applicant". Finally, the Court will determine the amount of compensation due (*Ahmadou Sadio Diallo (Republic of Guinea v. Democratic Republic of the Congo)*, *Compensation, Judgment, I.C.J. Reports 2012 (I)*, p. 332, para. 14).

33. The Court recalls that, "as a general rule, it is for the party which alleges a particular fact in support of its claims to prove the existence of that fact". Nevertheless, the Court has recognized that this general rule may be applied flexibly in certain circumstances, where, for example, the respondent may be in a better position to establish certain facts (*ibid.*, p. 332, para. 15, referring to the Judgment on the merits of 30 November 2010, *I.C.J. Reports 2010 (II)*, pp. 660-661, paras. 54-56).

34. In cases of alleged environmental damage, particular issues may arise with respect to the existence of damage and causation. The damage may be due to several concurrent causes, or the state of science regarding the causal link between the wrongful act and the damage may be uncertain. These are difficulties that must be addressed as and when they arise in light of the facts of the case at hand and the evidence presented to the Court. Ultimately, it is for the Court to decide whether there is a sufficient causal nexus between the wrongful act and the injury suffered.

35. In respect of the valuation of damage, the Court recalls that the absence of adequate evidence as to the extent of material damage will not, in all situations, preclude an award of compensation for that damage. For example, in the *Ahmadou Sadio Diallo* case, the Court determined the

amount of compensation due on the basis of equitable considerations (see *Ahmadou Sadio Diallo (Republic of Guinea v. Democratic Republic of the Congo)*, *Compensation, Judgment*, *I.C.J. Reports 2012 (I)*, p. 337, para. 33). A similar approach was adopted by the Tribunal in the *Trail Smelter* case, which, quoting the Supreme Court of the United States of America in *Story Parchment Company v. Paterson Parchment Paper Company* (*United States Reports*, 1931, Vol. 282, p. 555), stated:

“Where the tort itself is of such a nature as to preclude the ascertainment of the amount of damages with certainty, it would be a perversion of fundamental principles of justice to deny all relief to the injured person, and thereby relieve the wrongdoer from making any amend for his acts. In such case, while the damages may not be determined by mere speculation or guess, it will be enough if the evidence show the extent of the damages as a matter of just and reasonable inference, although the result be only approximate.” (*Trail Smelter case (United States, Canada)*, 16 April 1938 and 11 March 1941, United Nations, *Reports of International Arbitral Awards (RIAA)*, Vol. III, p. 1920.)

* *

36. In the present case, Costa Rica claims compensation for two categories of damage. First, Costa Rica claims compensation for quantifiable environmental damage caused by Nicaragua’s excavation of the 2010 *caño* and the 2013 eastern *caño*. It makes no claim in respect of the 2013 western *caño*. Secondly, Costa Rica claims compensation for costs and expenses incurred as the result of Nicaragua’s unlawful activities, including expenses incurred to monitor or remedy the environmental damage caused.

37. Nicaragua argues that Costa Rica is entitled to compensation for “material damages”, the scope of which is limited to “damage to property or other interests of the State . . . which is assessable in financial terms”. Nicaragua contends that the 2015 Judgment of the Court in this case further limits the scope *ratione materiae* and *ratione loci* of compensation to losses or expenses caused by the activities that the Court determined were unlawful.

38. The Court will address the Parties’ submissions related to environmental damage in Section III. The Parties’ submissions on costs and expenses incurred as a result of Nicaragua’s activities are addressed in Section IV. The issue of interest is dealt with in Section V. The total sum awarded is stated in Section VI.

III. COMPENSATION FOR ENVIRONMENTAL DAMAGE

1. *The Compensability of Environmental Damage*

39. Costa Rica argues that it is “settled” that environmental damage is compensable under international law. It notes that other international adjudicative bodies have awarded compensation for environmental damage, including for harm to environmental resources that have no commercial value. Costa Rica contends that its position is supported by the practice of the United Nations Compensation Commission (“UNCC”), which awarded compensation to several States for environmental damage caused by Iraq’s illegal invasion and occupation of Kuwait in 1990 and 1991.

40. Nicaragua does not contest Costa Rica’s contention that damage to the environment is compensable. In this connection, Nicaragua also refers to the approach adopted by the UNCC panels with respect to environmental claims arising from the first Gulf War. However, Nicaragua contends that, following that approach, Costa Rica is entitled to compensation for “restoration costs” and “replacement costs”. According to Nicaragua, “restoration costs” comprise the costs that Costa Rica reasonably incurred in the construction of a dyke across the 2013 eastern *caño* while remediating the impact of Nicaragua’s works. Nicaragua also recognizes that Costa Rica is entitled to “replacement costs” for the environmental goods and services that either have been or may be lost prior to the recovery of the impacted area.

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41. The Court has not previously adjudicated a claim for compensation for environmental damage. However, it is consistent with the principles of international law governing the consequences of internationally wrongful acts, including the principle of full reparation, to hold that compensation is due for damage caused to the environment, in and of itself, in addition to expenses incurred by an injured State as a consequence of such damage. The Parties also agree on this point.

42. The Court is therefore of the view that damage to the environment, and the consequent impairment or loss of the ability of the environment to provide goods and services, is compensable under international law. Such compensation may include indemnification for the impairment or loss of environmental goods and services in the period prior to recovery and payment for the restoration of the damaged environment.

43. Payment for restoration accounts for the fact that natural recovery may not always suffice to return an environment to the state in which it

was before the damage occurred. In such instances, active restoration measures may be required in order to return the environment to its prior condition, in so far as that is possible.

2. *Methodology for the Valuation of Environmental Damage*

44. Costa Rica accepts that there is no single method for the valuation of environmental damage and acknowledges that a variety of techniques have been used in practice at both the international and national level. It concludes that the appropriate method of valuation will depend, *inter alia*, on the nature, complexity, and homogeneity of the environmental damage sustained.

45. In the present case, the methodology that Costa Rica considers most appropriate, which it terms the “ecosystem services approach” (or “environmental services framework”), follows the recommendations of an expert report commissioned from Fundación Neotrópica, a Costa Rican non-governmental organization. Costa Rica claims that the valuation of environmental damage pursuant to an ecosystem services approach is well recognized internationally, up-to-date, and is also appropriate for the wetland protected under the Ramsar Convention that Nicaragua has harmed.

46. In Costa Rica’s view, the ecosystem services approach finds support in international and domestic practice. First, Costa Rica notes that the “Guidelines for the Development of Domestic Legislation on Liability, Response Action and Compensation for Damage Caused by Activities Dangerous to the Environment” of the United Nations Environment Programme (“UNEP”), which were adopted by its Governing Council in 2010, recognize that environmental damage may be calculated on the basis of factors such as the “reduction or loss of the ability of the environment to provide goods and services”. Secondly, Costa Rica highlights that Decision XII/14 of the Conference of the Parties to the Convention on Biological Diversity invites parties to take into account, as appropriate, the above-mentioned UNEP Guidelines. Furthermore, Decision XII/14 invites parties to take into account a “synthesis report” on technical information, which states that “[l]iability and redress rules might also address . . . the loss of [the ecosystem’s] ability to provide actual or potential goods and services”. Thirdly, Costa Rica notes that the ecosystem services methodology is employed by several States in the context of their domestic legislation on environmental damage. Finally, Costa Rica argues that the Report of the Ramsar Advisory Mission No. 69, which assessed environmental damage resulting from the excavation of the 2010 *caño*, adopted the ecosystem services approach.

47. Costa Rica explains that, according to the ecosystem services approach, the value of an environment is comprised of goods and services

that may or may not be traded on the market. Goods and services that are traded on the market (such as timber) have a “direct use value” whereas those that are not (such as flood prevention or gas regulation) have an “indirect use value”. In Costa Rica’s view, the valuation of environmental damage must take into account both the direct and indirect use values of environmental goods and services in order to provide an accurate reflection of the value of the environment. In order to ascribe a monetary value to the environmental goods and services that Nicaragua purportedly damaged, Costa Rica uses a value transfer approach for most of the goods and services affected. Under the value transfer approach, the damage caused is assigned a monetary value by reference to a value drawn from studies of ecosystems considered to have similar conditions to the ecosystem concerned. However, Costa Rica uses a direct valuation approach where the data for such valuation is available.

48. Costa Rica claims that the methodology adopted by Nicaragua is the same as that used by the UNCC in relation to environmental claims, which dealt with a subject-matter that was radically different to that of the present case. Costa Rica argues that valuation practices have evolved since the UNCC concluded claims processing in 2005, and that more recent methodologies, such as the ecosystem services approach, “recognize the full and potentially long lasting extent of harm to the environment”.

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49. For its part, Nicaragua considers that Costa Rica is entitled to compensation “to replace the environmental services that either have been or may be lost prior to recovery of the impacted area”, which it terms the “ecosystem service replacement cost” or “replacement costs”. According to Nicaragua, the proper method for calculating this value is by reference to the price that would have to be paid to preserve an equivalent area until the services provided by the impacted area have recovered.

50. Nicaragua considers its methodology to be the standard approach to natural resource damage assessment. In particular, it notes that this was one of the methodologies followed by the UNCC when assessing claims for environmental damage. Nicaragua argues that there is no merit to Costa Rica’s claim that this methodology has been displaced by more recent methods of valuation of environmental damage.

51. Nicaragua contends that the methodology that Costa Rica adopts is a “benefits transfer” approach, which seeks to value the damaged environmental services by reference to values assigned to such services in other places and in other contexts. In Nicaragua’s view, such an approach is unreliable and has not been used widely in practice. Furthermore,

Nicaragua argues that the UNCC declined to accept the “benefits transfer” approach, even though it was asked to do so.

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52. The Court notes that the valuation methods proposed by the Parties are sometimes used for environmental damage valuation in the practice of national and international bodies, and are not therefore devoid of relevance to the task at hand. However, they are not the only methods used by such bodies for that purpose, nor is their use limited to valuation of damage since they may also be used to carry out cost/benefit analysis of environmental projects and programmes for the purpose of public policy setting (see for example UNEP, “Guidance Manual on Valuation and Accounting of Ecosystem Services for Small Island Developing States” (2014), p. 4). The Court will not therefore choose between them or use either of them exclusively for the purpose of valuation of the damage caused to the protected wetland in Costa Rica. Wherever certain elements of either method offer a reasonable basis for valuation, the Court will nonetheless take them into account. This approach is dictated by two factors: first, international law does not prescribe any specific method of valuation for the purposes of compensation for environmental damage; secondly, it is necessary, in the view of the Court, to take into account the specific circumstances and characteristics of each case.

53. In its analysis, the Court will be guided by the principles and rules set out in paragraphs 29 to 35 above. In determining the compensation due for environmental damage, the Court will assess, as outlined in paragraph 42, the value to be assigned to the restoration of the damaged environment as well as to the impairment or loss of environmental goods and services prior to recovery.

3. Determination of the Extent of the Damage Caused to the Environment and of the Amount of Compensation Due

54. The Court notes that, for both Costa Rica and Nicaragua, the size of the area affected by the unlawful activities of Nicaragua was 6.19 hectares.

55. Although Costa Rica identifies 22 categories of goods and services that could have been impaired or lost as a result of Nicaragua’s wrongful actions, it claims compensation in respect of only six of them: standing timber; other raw materials (fibre and energy); gas regulation and air quality; natural hazards mitigation; soil formation and erosion control; and biodiversity, in terms of habitat and nursery.

56. Costa Rica claims that it is appropriate to calculate the total loss sustained as the result of Nicaragua's actions over a period of 50 years, which it considers to be a conservative estimate of the time required for the affected area to recover. Consequently, it provides a net present value for the total loss on the basis of a recovery period of 50 years with a discount rate of 4 per cent. According to Fundación Neotrópica, the discount rate is representative of the rate at which the ecosystem will recover. In its view, as the ecosystem goods and services recover, the yearly value of the environmental damage caused will gradually decrease.

57. Based on the above approach, Costa Rica claims, as compensation for the impairment or loss of environmental goods and services as a result of Nicaragua's activities, payment of US\$2,148,820.82 in respect of the 2010 *caño* and US\$674,290.92 in respect of the 2013 eastern *caño*. Costa Rica also claims US\$57,634.08 for restoration costs, comprising US\$54,925.69 for the cost of replacement soil in the 2010 *caño* and the 2013 eastern *caño* and US\$2,708.39 for the restoration of the wetland. Costa Rica claims a total amount of compensation of US\$2,880,745.82 for the environmental damage sustained as the result of Nicaragua's actions.

58. For its part, Nicaragua asserts, on the basis of its own method (see paragraph 49 above), that Costa Rica is entitled to replacement costs of US\$309 per hectare per year, the figure which Costa Rica pays landowners and communities as an incentive to protect habitat under its domestic environmental conservation scheme (adjusted to 2017 prices). Over a reasonable period for full recovery, which it estimates to be 20 to 30 years, and taking into account a 4 per cent discount rate, Nicaragua concludes that the present value of the replacement costs amounts to between US\$27,034 and US\$34,987.

59. Nicaragua argues that even if, *quod non*, the ecosystem services approach proposed by Costa Rica was an appropriate method for quantifying environmental damage, Costa Rica implemented it incorrectly in ways that create a dramatic overvaluation of the impairment or loss of environmental goods and services as a result of the damage caused. In particular, Nicaragua claims that: Costa Rica wrongly assumes the presence of environmental services that were not provided by the area impacted by Nicaragua's activities; Costa Rica incorrectly values the gas regulation and air quality services provided by the area; and Costa Rica erroneously assumes that all goods and services will be impacted for 50 years.

60. Costa Rica claims, following the six categories of environmental goods and services that it contends have been lost, under a first head of

damage, compensation for trees that were felled in the construction of the 2010 *caño* and the 2013 eastern *caño*. The valuation it provides is based on the average price of standing timber for the species that were present in the 2010 *caño* (US\$64.65 per cubic metre) and the 2013 eastern *caño* (US\$40.05 per cubic metre), using figures taken from the Costa Rican National Forestry Office. Using these figures, Costa Rica values the eliminated stock and the growth potential of that stock over 50 years, assuming a volume of standing timber of 211 cubic metres per hectare, a harvest rate of 50 per cent per year, and a growth rate of 6 cubic metres per hectare per year. Fundación Neotrópica, whose figures Costa Rica adopts, explains that it does not assume, by referring to a harvest rate of 50 per cent per year, that it is possible to remove half of the annual growth of the trees each year. It maintains that it does this because the asset degradation caused by Nicaragua's unlawful activities will be reflected in Costa Rica's physical, natural, and economic accounts every year as a decrease in the monetary value of the country's natural assets until it has fully recovered.

61. Nicaragua contests Costa Rica's valuation of the trees felled in the excavation of the 2010 *caño* and the 2013 eastern *caño*. First, it claims that the only material damage caused by Nicaragua's activities was the felling of trees in the vicinity of the 2010 *caño*. It argues that the 2013 eastern *caño* has quickly revegetated and is now virtually indistinguishable from the surrounding areas. Secondly, Nicaragua contends that Costa Rica is mistaken in its calculation of the value of the felled trees over a period of 50 years, because trees can only be harvested once. Thirdly, Nicaragua claims that Costa Rica's figures do not demonstrate that it has accounted for the cost that would be required to harvest the timber and transport it to market, thus contravening accepted valuation methodology.

62. Costa Rica claims compensation, under a second head of damage, for "other raw materials" (namely, fibre and energy) that Nicaragua allegedly removed from the affected area in the course of its excavation works. The figures that Costa Rica adopts are based on studies that quantify the value of raw materials in other ecosystems (namely, in Mexico and the Philippines), from which a unit price is constructed (US\$175.76 per hectare for the first year after the loss was caused, adjusted to 2016 prices). It uses this unit price to estimate the loss of raw materials in an area of 5.76 hectares (the area cleared during excavation of the 2010 *caño*) and 0.43 hectares (the area damaged in the construction of the 2013 eastern *caño*).

63. With regard to "other raw materials" (namely, fibre and energy), Nicaragua argues that, due to its rapid recovery, the area impacted by its activities has regained the ability to provide those goods and services.

In the alternative, Nicaragua contends that, even if Fundación Neotrópica had accurately assigned a unit value to other raw materials, it vastly inflated the valuation by assuming that the losses will extend for 50 years.

64. Thirdly, Costa Rica claims compensation for the impaired ability of the affected area to provide gas regulation and air quality services, such as carbon sequestration, which was allegedly caused by Nicaragua's unlawful activities. Costa Rica's estimate for the loss of this service is based on an academic study that values carbon stocks and flows in Costa Rican wetlands. Drawing on this study, Costa Rica estimates the loss of gas regulation and air quality services to amount to US\$14,982.06 per hectare (for the first year after the loss was caused, adjusted to 2016 prices). Costa Rica argues that the fact that some of the gas regulation and air quality services impaired or lost may also have benefitted the citizens of other countries is irrelevant to Nicaragua's liability to provide compensation for the unlawful harm caused to Costa Rica on its own territory.

65. Nicaragua contests Costa Rica's valuation of the gas regulation and air quality services in several respects. First, Nicaragua argues that the benefits from gas regulation and air quality services are distributed across the entire world, and thus that Costa Rica is entitled only to a small share of the value of this service. Secondly, it criticizes the study upon which Costa Rica's figures are based, arguing that Costa Rica does not demonstrate why that study is relevant to the affected area and does not explain why it ignores studies that assign lower values to the services. Thirdly, Nicaragua notes that the figure used by Costa Rica is a stock value, which reflects the total value of all carbon sequestered in the vegetation, soil, leaf litter, and organic debris in one hectare. In Nicaragua's view, this carbon stock can only be released once into the atmosphere. Nicaragua argues that it is therefore incorrect for Costa Rica to calculate its loss on the basis of the value of carbon stock each year for 50 years.

66. Under the fourth head of damage, Costa Rica contends that freshwater wetlands, such as the affected area, are valuable assets to mitigate natural hazards, such as coastal flooding, saline intrusion and coastal erosion. In Costa Rica's view, the ability of the affected area to provide such services has been impaired by Nicaragua's actions. It argues that this conclusion is supported by the Report of the Ramsar Advisory Mission No. 69, which explains that changes in the pattern of freshwater flow in wetlands can impact both the salinity of the water and flood control capacity of the area. Costa Rica values this service at US\$2,949.74 per hectare (for the first year after the loss was caused, adjusted to 2016 prices), based on the selection of a "low value" from a range of studies from Belize, Thailand and Mexico.

67. In Nicaragua's view, Costa Rica identifies no natural hazards that the affected area mitigated nor does it explain how Nicaragua's works impacted any natural hazard mitigation services provided. Furthermore, Nicaragua argues that Costa Rica's valuation is based entirely on a value transferred from a study that is irrelevant to the present case (namely, a study on the hazard mitigation services provided by coastal mangroves in Thailand).

68. Under the fifth head of damage, Costa Rica claims that the sediment that has refilled the 2010 *caño* and the 2013 eastern *caño* is both of a poorer quality and is more susceptible to erosion. It thus claims for the cost of replacement soil, which it values at US\$5.78 per cubic metre.

69. Nicaragua argues that the 2010 *caño* and the 2013 eastern *caño* have refilled rapidly with sediment and are now covered with vegetation. In Nicaragua's view, Costa Rica has not presented any evidence that the new soil is of a poorer quality nor has it demonstrated that the soil is more vulnerable to erosion as a result of Nicaragua's actions. Moreover, it notes that Costa Rica has not presented any indication of its intention to carry out further restoration work on the two *caños*.

70. Finally, Costa Rica claims compensation for the loss of biodiversity services in the affected area, both in terms of habitat and nursery services. Costa Rica's valuation of biodiversity services is based on studies that quantify the value of biodiversity in other ecosystems (namely, in Mexico, Thailand and the Philippines), from which it constructs a unit price (US\$855.13 per hectare for the first year after the loss was caused, adjusted to 2016 prices).

71. Nicaragua argues that, due to its rapid recovery, the affected area has regained the ability to provide biodiversity services. In the alternative, Nicaragua contends that, even if Fundación Neotrópica had accurately assigned a unit value to such services, it vastly inflated the valuation by assuming that the losses will extend for 50 years.

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72. Before assigning a monetary value to the damage to the environmental goods and services caused by Nicaragua's wrongful activities, the Court will determine the existence and extent of such damage, and whether there exists a direct and certain causal link between such damage and Nicaragua's activities. It will then establish the compensation due.

73. In this context, the Court notes that the Parties disagree on two issues: first, whether certain environmental goods and services have been impaired or lost, namely natural hazards mitigation and soil formation/erosion control; and secondly, the valuation of the environmental goods and services, which they consider have been impaired or lost, taking into account the length of the period necessary for their recovery.

74. In relation to the first of these issues, the Court is of the view that Costa Rica has not demonstrated that the affected area, due to a change in its ecological character, has lost its ability to mitigate natural hazards or that such services have been impaired. As regards soil formation and erosion control, Nicaragua does not dispute that it removed approximately 9,500 cubic metres of soil from the sites of the 2010 *caño* and the 2013 eastern *caño*. However, the evidence before the Court establishes that both *caños* have subsequently refilled with soil and there has been substantial revegetation. Accordingly, Costa Rica's claim for the cost of replacing all of the soil removed by Nicaragua cannot be accepted. There is some evidence that the soil which was removed by Nicaragua was of a higher quality than that which has now refilled the two *caños* but Costa Rica has not established that this difference has affected erosion control and the evidence before the Court regarding the quality of the two types of soil is not sufficient to enable the Court to determine any loss which Costa Rica might have suffered.

75. Concerning the four other categories of environmental goods and services for which Costa Rica claims compensation (namely, trees, other raw materials, gas regulation and air quality services, and biodiversity), the evidence before the Court indicates that, in excavating the 2010 *caño* and the 2013 eastern *caño*, Nicaragua removed close to 300 trees and cleared 6.19 hectares of vegetation. These activities have significantly affected the ability of the two impacted sites to provide the above-mentioned environmental goods and services. It is therefore the view of the Court that impairment or loss of these four categories of environmental goods and services has occurred and is a direct consequence of Nicaragua's activities.

76. With regard to the second issue, relating to the valuation of the damage caused to environmental goods and services, the Court cannot accept the valuations proposed by the Parties. In respect of the valuation proposed by Costa Rica, the Court has doubts regarding the reliability of certain aspects of its methodology, particularly in light of the criticism raised by Nicaragua and its experts in the written pleadings. Costa Rica assumes, for instance, that a 50-year period represents the time necessary for recovery of the ecosystem to the state prior to the damage caused. However, in the first instance, there is no clear evidence before the Court of the baseline condition of the totality of the environmental goods and services that existed in the area concerned prior to Nicaragua's activities. Secondly, the Court observes that different components of the ecosystem

require different periods of recovery and that it would be incorrect to assign a single recovery time to the various categories of goods and services identified by Costa Rica.

77. In the view of the Court, Nicaragua's valuation of US\$309 per hectare per year must also be rejected. This valuation is based on the amount of money that Costa Rica pays landowners and communities as an incentive to protect habitat under its domestic environmental conservation scheme. Compensation for environmental damage in an internationally protected wetland, however, cannot be based on the general incentives paid to particular individuals or groups to manage a habitat. The prices paid under a scheme such as that employed by Costa Rica are designed to offset the opportunity cost of preserving the environment for those individuals and groups, and are not necessarily appropriate to reflect the value of the goods and services provided by the ecosystem. Accordingly, the Court is of the view that Nicaragua's proposed valuation does not provide an adequate reflection of the value of the environmental goods and services impaired or lost in the affected area.

78. The Court considers, for the reasons specified below, that it is appropriate to approach the valuation of environmental damage from the perspective of the ecosystem as a whole, by adopting an overall assessment of the impairment or loss of environmental goods and services prior to recovery, rather than attributing values to specific categories of environmental goods and services and estimating recovery periods for each of them.

79. First, the Court observes, in relation to the environmental goods and services that have been impaired or lost, that the most significant damage to the area, from which other harms to the environment arise, is the removal of trees by Nicaragua during the excavation of the *caños*. An overall valuation can account for the correlation between the removal of the trees and the harm caused to other environmental goods and services (such as other raw materials, gas regulation and air quality services, and biodiversity in terms of habitat and nursery).

80. Secondly, an overall valuation approach is dictated by the specific characteristics of the area affected by the activities of Nicaragua, which is situated in the Northeast Caribbean Wetland, a wetland protected under the Ramsar Convention, where there are various environmental goods and services that are closely interlinked. Wetlands are among the most diverse and productive ecosystems in the world. The interaction of the physical, biological and chemical components of a wetland enable it to perform many vital functions, including supporting rich biological diversity, regulating water régimes, and acting as a sink for sediments and pollutants.

81. Thirdly, such an overall valuation will allow the Court to take into account the capacity of the damaged area for natural regeneration. As stated by the Secretariat of the Ramsar Convention, the area in the vicinity of the 2010 *caño* demonstrates a “high capability for natural regeneration of the vegetation . . . provided the physical conditions of the area are maintained”.

82. These considerations also lead the Court to conclude, with regard to the length of the period of recovery, that a single recovery period cannot be established for all of the affected environmental goods and services. Despite the close relationship between these goods and services, the period of time for their return to the pre-damage condition necessarily varies.

83. In its overall valuation, the Court will take into account the four categories of environmental goods and services the impairment or loss of which has been established (see paragraph 75).

84. The Court recalls that, in addition to the two valuations considered above, respectively submitted by Costa Rica and Nicaragua, Nicaragua also provides an alternative valuation of damage, calculated on the basis of the four categories of environmental goods and services. This valuation adopts Costa Rica’s ecosystems services approach but makes significant adjustments to it. Nicaragua refers to this valuation as a “corrected analysis” and assigns a total monetary value of US\$84,296 to the damage caused to the four categories of environmental goods and services.

85. The Court considers that Nicaragua’s “corrected analysis” underestimates the value to be assigned to certain categories of goods and services prior to recovery. First, for other raw materials (fibre and energy), the “corrected analysis” assigns a value that is based on the assumption that there will be no loss in those goods and services after the first year. Such an assumption is not supported by any evidence before the Court. Secondly, with respect to biodiversity services (in terms of nursery and habitat), the “corrected analysis” does not sufficiently account for the particular importance of such services in an internationally protected wetland where the biodiversity was described to be of high value by the Secretariat of the Ramsar Convention. Whatever regrowth may occur naturally is unlikely to match in the near future the pre-existing richness of biodiversity in the area. Thirdly, in relation to gas regulation and air quality services, Nicaragua’s “corrected analysis” does not account for the loss of future annual carbon sequestration (“carbon flows”), since it characterizes the loss of those services as a one-time loss. The Court does not consider that the impairment or loss of gas regulation and air quality services can be valued as a one-time loss.

86. The Court recalls, as outlined in paragraph 35 above, that the absence of certainty as to the extent of damage does not necessarily pre-

clude it from awarding an amount that it considers approximately to reflect the value of the impairment or loss of environmental goods and services. In this case, the Court, while retaining some of the elements of the “corrected analysis”, considers it reasonable that, for the purposes of its overall valuation, an adjustment be made to the total amount in the “corrected analysis” to account for the shortcomings identified in the preceding paragraph. The Court therefore awards to Costa Rica the sum of US\$120,000 for the impairment or loss of the environmental goods and services of the impacted area in the period prior to recovery.

87. In relation to restoration, the Court rejects Costa Rica’s claim of US\$54,925.69 for replacement soil for the reasons given in paragraph 74. The Court, however, considers that the payment of compensation for restoration measures in respect of the wetland is justified in view of the damage caused by Nicaragua’s activities. Costa Rica claims compensation in the sum of US\$2,708.39 for this purpose. The Court upholds this claim.

IV. COMPENSATION CLAIMED BY COSTA RICA FOR COSTS AND EXPENSES

88. In addition to its claims of compensation for environmental damage, Costa Rica requested that the Court award it compensation for costs and expenses incurred as a result of Nicaragua’s unlawful activities.

89. On the basis of the principles described above (see paragraphs 29 to 35), the Court must determine whether the costs and expenses allegedly incurred by Costa Rica are supported by the evidence, and whether Costa Rica has established a sufficiently direct and certain causal nexus between the internationally wrongful conduct of Nicaragua identified by the Court in its 2015 Judgment and the heads of expenses for which Costa Rica seeks compensation.

1. Costs and Expenses Incurred in relation to Nicaragua’s Unlawful Activities in the Northern Part of Isla Portillos between October 2010 and April 2011

90. Costa Rica alleges that between October 2010 (when it became aware of Nicaragua’s military presence on its territory) and April 2011 (when Nicaragua’s military withdrew from Costa Rica’s territory following the Court’s 2011 Order on provisional measures), it has incurred a range of expenses in relation to Nicaragua’s presence and unlawful activities, in the total amount of US\$80,926.45. Costa Rica provides the following breakdown of these expenses: (a) cost of fuel and maintenance services for police aircraft used to reach and to overfly the “disputed ter-

ritory” (US\$37,585.60); *(b)* salaries of Air Surveillance Service personnel required to attend access flights and overflights of the “disputed territory” (US\$1,044.66); *(c)* purchase of satellite images to verify Nicaragua’s presence and unlawful activities in the “disputed territory” (US\$17,600); *(d)* cost of obtaining a report from the United Nations Institute for Training and Research/United Nations Operational Satellite Applications Programme (UNITAR/UNOSAT) to verify Nicaragua’s unlawful activities in the “disputed territory” (US\$15,804); *(e)* salaries of National Coast Guard Service personnel required to provide water transportation to the area near the “disputed territory” (US\$6,780.60); *(f)* salaries of Tortuguero Conservation Area (ACTo) personnel required to attend missions in or near the “disputed territory” (US\$1,309.90); *(g)* food and water supplies for ACTo personnel required to attend environmental monitoring missions in or near the “disputed territory” (US\$446.12); *(h)* fuel for fluvial transportation for ACTo personnel required to attend missions in or near the “disputed territory” (US\$92); and *(i)* fuel for land transportation for ACTo personnel required to attend missions in or near the “disputed territory” (US\$263.57).

91. Nicaragua asserts that Costa Rica’s claims for expenses allegedly incurred in connection with its police deployment are not compensable. Indeed, in its view, Costa Rican security forces were not employed to prevent or remedy any of the material damage caused by Nicaragua between October 2010 and January 2011. Nicaragua is also of the opinion that the flights allegedly carried out by Costa Rica were not related to its monitoring activities in the “disputed territory”, nor were they substantiated by documentation. Nicaragua further argues that the salaries of Air Surveillance Service personnel, National Coast Guard Service personnel and ACTo personnel are not compensable as these staff were already employed as government officials. Finally, Nicaragua argues that the claims for satellite imagery and reports are “non-compensable litigation expenses” since they were largely commissioned by Costa Rica in connection with the presentation of its case on the merits. Moreover, Nicaragua asserts that they cover not only the “disputed territory” but also other areas.

* *

92. The Court now turns to its assessment of the compensation due for costs and expenses incurred by Costa Rica as a consequence of Nicaragua's presence and unlawful activities in the northern part of Isla Portillos between October 2010 and April 2011. Upon examination of all the relevant evidence and documents, the Court considers that Costa Rica has, with reference to two heads of expenses relating to the cost of fuel and maintenance services and the cost of obtaining a UNITAR/UNOSAT report, provided adequate evidence demonstrating that some of these costs have a sufficiently direct and certain causal nexus with the internationally wrongful conduct of Nicaragua identified by the Court in its 2015 Judgment.

93. With regard to the first head of expenses relating to fuel and maintenance services for police aircraft used to reach and overfly the northern part of Isla Portillos, the Court finds part of these expenses compensable. It appears from the evidence submitted to the Court that the Costa Rican Air Surveillance Service carried out several overflights of the relevant area in the period in question. The Court is satisfied that some of these flights were undertaken in order to ensure effective inspection of the northern part of Isla Portillos, and thus considers that these ancillary costs are directly connected to the monitoring of that area that was made necessary as a result of Nicaragua's wrongful conduct.

94. Turning to the quantification of the amount of compensation with respect to that first head of expenses, the Court notes that Costa Rica claims US\$37,585.60 "for fuel and maintenance services for the police aircraft used" to reach and to overfly the "disputed territory" on 20, 22, 27 and 31 October 2010 and on 1 and 26 November 2010.

95. Costa Rica has presented evidence in the form of relevant flight logs, and an official communication dated 2 March 2016 (from the Administrative Office of the Air Surveillance Service of the Department of Air Operations of the Ministry of Public Security) with regard to the cost of overflights performed by the Air Surveillance Service on, *inter alia*, 20, 22, 27 and 31 October 2010 (US\$31,740.60), as well as on 1 and 26 November 2010 (US\$5,845), totalling US\$37,585.60. The Court notes that Costa Rica calculated these expenses on the basis of the operating costs for the hourly use of each aircraft deployed; these operating costs included expenses for "fuel", "overhaul", "insurance" and "miscellaneous". With regard to the "insurance" costs, the Court considers that Costa Rica has failed to demonstrate that it incurred any additional expense as a result of the specific missions of the police aircraft over the northern part of Isla Portillos. This insurance expense is thus not compensable. As to the "miscellaneous" costs, Costa Rica has failed to specify the nature of this expense. Thus, the evidence before the Court is not sufficient to show that this expense relates to the operating costs of the aircraft used. Moreover, the Court observes that Costa Rica itself has specified in its Memorial on compensation that it claimed expenses only

for fuel and maintenance services. The Court therefore considers that these miscellaneous expenses are not compensable.

96. The Court also excludes the cost of flights to transport cargo or members of the press, the cost of flights with a destination other than the northern part of Isla Portillos, as well as the cost of flights for which, in the relevant flight logs, no indication of the persons on board has been given. Costa Rica has failed to demonstrate why these missions were necessary to respond to Nicaragua's unlawful activities and has therefore not established the requisite causal nexus between Nicaragua's unlawful activities and the expenses relating to these flights. In addition, the Court has corrected a mistake in Costa Rica's calculations for October 2010 in the list attached to the above-mentioned communication of 2 March 2016 concerning the duration of a flight on 22 October 2010. The compensation claim was calculated by Costa Rica on the basis of the duration of the flight indicated as 11.6 hours (aircraft registration number MSP018, Soloy), while the flight log indicates an actual duration of 4.6 hours.

97. The Court considers it necessary to recalculate the compensable expenses based on the information provided in the above official communication of 2 March 2016 and in the flight logs, by reference to the number and duration of the flights actually conducted in October and November 2010 in connection with the inspection of the northern part of Isla Portillos, and only taking into account the costs of "fuel" and "overhaul". The Court therefore finds that, under this head of expenses, Costa Rica is entitled to compensation in the amount of US\$4,177.30 for October 2010, and US\$1,665.90 for November 2010, totalling US\$5,843.20.

98. The second head of expenses that the Court finds compensable relates to Costa Rica's claim for the cost of obtaining a report from UNITAR/UNOSAT dated 4 January 2011. The evidence shows that Costa Rica incurred this expense in order to detect and assess the environmental impact of Nicaragua's presence and unlawful activities in Costa Rican territory. The Court has reviewed this UNITAR/UNOSAT report (entitled "Morphological and Environmental Change Assessment: San Juan River Area (including Isla Portillos and Calero), Costa Rica") and is satisfied that the analysis given in this report provides a technical evaluation of the damage that has occurred as a consequence of Nicaragua's unlawful activities in the northern part of Isla Portillos. In particular, the report states that, based on high-resolution satellite imagery acquired on 8 August 2010, there are "strong signature indicators of recent tree cover removal", with "hundreds of fallen or cut trees [being] visible". According to the report, it is likely that the removal of this tree cover occurred "during the period of May-August 2010". The report also states that, "[b]ased on an analysis of satellite imagery recorded on 19 November and 14 December 2010, there is strong evidence to suggest that a new river

channel leading from the San Juan River to the Los Portillos Lagoon was constructed between August and November 2010”.

99. Turning to the quantification of the amount of compensation, the Court notes that Costa Rica has presented evidence in the form of a numbered and dated invoice from UNITAR/UNOSAT, with an annexed cost breakdown, where reference is made to “Satellite-based assessment of environmental and geomorphological changes in Costa Rica”. The invoice for this report totals US\$15,804. In light of the Court’s finding that the analysis contained in the UNITAR/UNOSAT report is directly relevant to Nicaragua’s unlawful activities, the Court considers that there is a sufficiently direct and certain causal nexus between those activities and the cost of commissioning the report. The Court therefore finds that Costa Rica is entitled to full compensation in the sum of US\$15,804.

100. The Court now turns to those heads of expenses with reference to which it considers that Costa Rica has failed to meet its burden of proof.

101. The Court notes that three heads of expenses (incurred between October 2010 and April 2011) for which Costa Rica seeks compensation relate to salaries of Costa Rican personnel allegedly involved in monitoring activities in the northern part of Isla Portillos, namely, the salaries of personnel employed with the Air Surveillance Service, the National Coast Guard Service and ACTo. The total amount claimed by Costa Rica for this category of expense is US\$9,135.16. In this regard, the Court considers that salaries of government officials dealing with a situation resulting from an internationally wrongful act are compensable only if they are temporary and extraordinary in nature. In other words, a State is not, in general, entitled to compensation for the regular salaries of its officials. It may, however, be entitled to compensation for salaries in certain cases, for example, where it has been obliged to pay its officials over the regular wage or where it has had to hire supplementary personnel, whose wages were not originally envisaged in its budget. This approach is in line with international practice (see UNCC, Report and Recommendations made by the Panel of Commissioners concerning the First Instalment of “F2” Claims, United Nations doc. S/AC.26/1999/23, 9 December 1999, para. 101; UNCC, Report and Recommendations made by the Panel of Commissioners concerning the Second Instalment of “F2” Claims, United Nations doc. S/AC.26/2000/26, 7 December 2000, paras. 52-58; see also *M/V “SAIGA” (No. 2) (Saint Vincent and the Grenadines v. Guinea)*, Judgment, ITLOS Reports 1999, p. 67, para. 177).

102. The Court observes that, in the present proceedings, Costa Rica has not produced evidence that, between October 2010 and April 2011, it incurred any extraordinary expenses in terms of the payment of salaries

of government officials. There is some indication in the evidence adduced that Costa Rican government officials were assigned functions and duties in connection with Costa Rica's response to Nicaragua's wrongful conduct. For example, Annex 7 to the Memorial includes a document from the Department of Salaries and Wages of the National Coast Guard Service, entitled "Report on working hours by personnel . . . in missions that took place on [the] occasion of Nicaragua's occupation of Costa Rican territory — 21 October 2010 to 19 January 2015". There is no evidence, however, that any of these functions and duties were carried out by personnel other than regular government officials. The Court therefore finds that Costa Rica is not entitled to compensation for the salaries of personnel employed by the Air Surveillance Service, the National Coast Guard Service and ACTo.

103. The Court further observes that three other heads of expenses are closely related to the functions of those personnel employed by ACTo (to conduct environmental monitoring missions in or near the northern part of Isla Portillos), for which Costa Rica claims costs totalling US\$801.69 incurred in connection with food and water supplies (US\$446.12), fuel for fluvial transportation (US\$92) and fuel for land transportation (US\$263.57). As evidence of the costs incurred under these heads of expenses, Costa Rica refers to Annex 6 to its Memorial. This annex is comprised of a letter (with attachment) dated 6 January 2016 from the National System of Conservation Areas (Tortuguero Conservation Area Natural Resource Management) of the Costa Rican Ministry of the Environment and Energy, and addressed to the Ministry of Foreign Affairs of Costa Rica. It is stated in the letter that the purpose of the communication is "the formal transmittal of two binders containing printed information" including "copies of logs, reports, among other documents, which provide evidence of the participation of government officials and ACTo teams in addressing the problems arising from the Nicaraguan invasion of Isla Calero". However, Annex 6 to the Memorial does not contain any such "logs" or "reports"; it only contains two tables which, for evidentiary purposes, are difficult to follow. The Court notes that, in terms of entries for costs related to land transportation, and to food and water, no specific information is provided to show in what way these expenses were connected to Costa Rica's monitoring activities undertaken as a direct consequence of Nicaragua's unlawful activities in the northern part of Isla Portillos in the period between October 2010 and April 2011. Moreover, these tables do not provide any information whatsoever regarding costs incurred in connection with fluvial transportation.

104. In light of the above, the Court considers that Costa Rica has failed to provide sufficient evidence to support its claims for the expenses under these three heads.

105. The Court finally turns to Costa Rica's claim that it be compensated in the amount of US\$17,600 for the cost of purchasing two satellite images, which, in its view, were necessary in order to verify Nicaragua's presence and unlawful activities in the northern part of Isla Portillos. The Court considers that, to the extent that such images did provide information as to Nicaragua's conduct in the northern part of Isla Portillos, this head of expenses could be compensable on the ground that there was a sufficiently direct and certain causal nexus between Nicaragua's unlawful activities and the cost thus incurred. However, having reviewed the evidence adduced by Costa Rica in support of this claim — in the form of two invoices dated 1 and 10 December 2010 (invoice Nos. 106 and 108), respectively, from INGEO innovaciones geográficas S.A. — the Court notes that neither of these invoices provides any indication as to the area covered by the two satellite images. It follows that the Court cannot conclude, on the basis of these documents, that these images related to the northern part of Isla Portillos, and that they were used for the verification of Nicaragua's presence and unlawful activities in that area. The Court therefore finds that Costa Rica has not provided sufficient evidence in support of its claim for compensation under this head of expenses.

106. In conclusion, the Court finds that Costa Rica is entitled to compensation in the amount of US\$21,647.20 for the expenses it incurred in relation to Nicaragua's presence and unlawful activities in the northern part of Isla Portillos between October 2010 and April 2011. This figure is made up of US\$5,843.20 for the cost of fuel and maintenance services for police aircraft used to reach and to overfly the northern part of Isla Portillos, and US\$15,804 for the cost of obtaining a report from UNITAR/UNOSAT to verify Nicaragua's unlawful activities in that area.

2. *Costs and Expenses Incurred in Monitoring the Northern Part of Isla Portillos following the Withdrawal of Nicaragua's Military Personnel and in Implementing the Court's 2011 and 2013 Orders on Provisional Measures*

107. Costa Rica recalls that the Court, in its 2011 Order, stated that

“in order to prevent the development of criminal activity in the disputed territory in the absence of any police or security forces of either Party, each Party has the responsibility to monitor [the disputed] territory from the territory over which it unquestionably holds sovereignty” (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, *Provisional Measures, Order of 8 March 2011*, I.C.J. Reports 2011 (I), p. 25, para. 78).

Costa Rica adds that the Court, in operative paragraph 59, subparagraph (1) of its 2013 Order, reaffirmed the measures indicated in its 2011 Order. Costa Rica states that, in fulfilment of its obligations under the Court's 2011 and 2013 Orders, it incurred expenses in monitoring the "disputed territory" following the withdrawal of Nicaragua's military personnel, so as to avoid irreparable prejudice being caused to the protected wetland. These expenses related, *inter alia*, to visits and overflights of the "disputed territory"; establishment and staffing of new police posts in close proximity to the area; transportation; instruments, tools, materials and supplies; salaries of monitoring personnel; food and water supplies; and the purchase of satellite images and a report from UNITAR/UNOSAT. According to Costa Rica, the total amount of these expenses is US\$3,551,433.67.

108. Costa Rica gives the following individual breakdown of the expenses it has incurred as a result of Nicaragua's unlawful activities: (a) cost of fuel and maintenance services of police aircraft and salaries of Air Surveillance Service personnel for the inspection carried out in co-ordination with the Secretariat of the Ramsar Convention on 5 and 6 April 2011 (US\$21,128.55); (b) cost of equipment and repairs to equipment for the two new police posts established at Laguna de Agua Dulce and Isla Portillos (US\$24,065.87); (c) staffing of police posts in Laguna de Agua Dulce and Isla Portillos (US\$3,092,834.17); (d) cost of fluvial transportation provided by the National Coast Guard Service to the Public Force personnel and the Border Police (US\$22,678.80); (e) cost of four all-terrain vehicles (ATVs) for the police posts in Laguna de Agua Dulce and Isla Portillos (US\$81,208.40); (f) cost of a tractor for the equipment and maintenance of the biological station at Laguna Los Portillos to allow monitoring of the environment of the "disputed territory" (US\$35,500); (g) salaries of ACTo personnel taking part in monitoring activities in different site visits (US\$25,161.41); (h) cost of food and water supplies for ACTo personnel (US\$8,412.55); (i) cost of fuel for transportation of ACTo personnel (US\$3,213.04); (j) acquisition price of two ATVs and three cargo trailers, dedicated to the biological station (US\$42,752.76); (k) cost of fuel for transportation of personnel and supplies to the biological station (US\$6,435.12); (l) purchase of satellite images of the "disputed territory" (US\$160,704); and (m) cost of obtaining a report from UNITAR/UNOSAT to assess damage caused in the "disputed territory" as a consequence of Nicaragua's unlawful activities (US\$27,339).

109. Nicaragua contends that nearly all of Costa Rica's "purported 'monitoring' expenses" (US\$3,092,834.17) are salaries of Costa Rican

security personnel deployed between March 2011 and December 2015 to police newly constructed posts in order to “protect against the imagined threat of Nicaragua reoccupying the disputed area and, especially, occupying other parts of Costa Rica”. As such, it maintains, they are unrelated to the material damage caused by Nicaragua’s works in the “disputed territory” and are thus “inappropriate claims” for compensation. Nicaragua argues that even if the salaries of the Costa Rican police were, in principle, compensable, a State is only entitled to compensation for extraordinary expenses, such as costs of hiring new personnel or the payment of overtime. According to Nicaragua, Costa Rica, however, simply redeployed existing personnel from elsewhere. Moreover, Nicaragua contends that Costa Rica’s compensation claim for the wages it paid to its security personnel is not substantiated by appropriate evidence.

110. Nicaragua asserts that Costa Rica’s claims for expenses it allegedly incurred in connection with its police deployment — such as the wages paid to personnel who provided fluvial transport for the police deployment and the purchase of various items of equipment — are not compensable because the deployment of Costa Rican security forces was not to prevent or remedy any of the material damage caused by Nicaragua between October 2010 and January 2011 and in September 2013. Furthermore, according to Nicaragua, none of these expenses were extraordinary, nor were they supported by evidence.

111. Nicaragua maintains that claims for compensation for satellite images taken between September 2011 and September 2015 and for reports prepared by UNITAR/UNOSAT are “non-compensable litigation expenses” since they were largely commissioned by Costa Rica in connection with the presentation of its case on the merits. Moreover, Nicaragua asserts that they cover not only the “disputed territory” but also other areas.

* *

112. With regard to compensation for monitoring activities claimed to have been carried out in implementation of the Court’s 2011 and 2013 Orders, the Court considers that Costa Rica has, with reference to three heads of expenses, provided adequate evidence demonstrating that some of these expenses have a sufficiently direct and certain causal nexus with the internationally wrongful conduct of Nicaragua identified by the Court in its 2015 Judgment.

113. First, the Court finds partially compensable Costa Rica’s expenses for its two-day inspection of the northern part of Isla Portillos on 5 and 6 April 2011, both in co-ordination and together with the Secretariat of

the Ramsar Convention. This mission was carried out by Costa Rican technical experts accompanied by the technical experts of the Secretariat for the purposes of making an assessment of the environmental situation in the area and of identifying actions to prevent further irreparable damage in that part of the wetland as a consequence of Nicaragua's unlawful activities. In particular, according to the technical report produced by the officials of the Secretariat of the Ramsar Convention,

“[t]he main aims of the visit to the site were the identification and technical evaluation of the environmental situation of the study area to determine the consequences of the works carried out, the impact chains initiated, their implications and the preventive, corrective, mitigating or compensatory environmental measures that would need to be implemented to restore the natural environmental balance of the site to avoid new, irreparable changes to the wetland”.

In the view of the Court, the inspection carried out by Costa Rica on 5 and 6 April 2011 was therefore directly connected to the monitoring of the northern part of Isla Portillos that was made necessary as a result of Nicaragua's wrongful conduct.

114. Turning to the quantification of the amount of compensation, the Court notes that Costa Rica claims US\$20,110.84 “for fuel and maintenance services on the police aircrafts used” and US\$1,017.71 “for the salaries of air surveillance service personnel”.

115. As evidence, Costa Rica has presented relevant flight logs and an official communication dated 2 March 2016 from the Administrative Office of the Air Surveillance Service of the Department of Air Operations of the Ministry of Public Security (as already referred to above in paragraph 95) which includes details of the cost of overflights performed by the Air Surveillance Service on 5 and 6 April 2011 totalling US\$20,110.84. The Court observes that there are shortcomings similar to those it identified earlier in paragraphs 95 and 96 when it reviewed Costa Rica's evidentiary approach in establishing the cost of fuel and maintenance services for police aircraft. In particular, regarding the expenses linked to its monitoring activities for the period now under review, the Court notes that Costa Rica calculated these expenses on the basis of the operating costs for the hourly use of each aircraft deployed; these operating costs included expenses for “fuel”, “overhaul”, “insurance” and “miscellaneous”. As already noted above (see paragraph 95), the Court considers that such insurance cannot be a compensable expense. As to the “miscellaneous” costs, Costa Rica has failed to specify the nature of this expense. Moreover, the Court observes that Costa Rica itself has specified in its Memorial on compensation that it claimed expenses only for fuel and maintenance services. The Court therefore

considers that this head of expenses is not compensable. The Court also excludes the cost of flights to transport members of the press, for the same reasons given in paragraph 96 above.

116. The Court considers it necessary to evaluate the compensable expenses based on the information provided in the above official communication of 2 March 2016, and in the flight logs, by reference to the number and duration of the flights conducted on 5 and 6 April 2011 in connection with the inspection of the northern part of Isla Portillos, and only taking into account the costs of “fuel” and “overhaul”. The Court therefore finds that, under this head of expenses, Costa Rica is entitled to compensation in the amount of US\$3,897.40.

117. The Court notes that Costa Rica has also advanced a claim of US\$1,017.71 for salaries of Air Surveillance Service personnel involved in aircraft missions. The Court does not however find that Costa Rica is entitled to claim the cost of salaries for the April 2011 inspection mission. As already noted above (see paragraph 101), a State cannot recover salaries for government officials that it would have paid regardless of any unlawful activity committed on its territory by another State.

118. Secondly, the Court finds partially compensable Costa Rica’s claim for the purchase, in the period running from September 2011 to October 2015, of satellite images effectively to monitor and verify the impact of Nicaragua’s unlawful activities. To the extent that these satellite images cover the northern part of Isla Portillos, the Court considers that there is a sufficiently direct and certain causal nexus between the internationally wrongful conduct of Nicaragua identified by the Court in its Judgment on the merits and the head of expenses for which Costa Rica seeks compensation.

119. Turning to the quantification of the amount of compensation, the Court notes that Costa Rica has presented evidence in the form of numbered and dated invoices and delivery reports corresponding to the purchase of satellite images from INGEO innovaciones geográficas S.A. and from GeoSolutions Consulting, Inc. S.A. Under this head of expenses, Costa Rica claims a total of US\$160,704. Having carefully reviewed these invoices and delivery reports, the Court notes that, by reference to the area covered by the satellite images, these invoices can be divided into three sets. The first set relates to the satellite images that cover the northern part of Isla Portillos (see invoice Nos. 204, 205, 215, 216, 218, 219, 224, 62, 65, 70, 73 and 86); the second set relates to the satellite images that cover the general area of the northern border with Nicaragua (see invoice Nos. 172, 174, 179, 188, 189, 191 and 90); and the third set provides no indication of the area covered by the satellite images (invoice Nos. 144, 150, 157, 163, 164, 169 and 171).

120. The Court considers that, as the satellite images contained in the first and second sets of invoices all cover the northern part of Isla Portillos, their purchase is, in principle, compensable. However, the Court notes that most of these satellite images cover an area that extends beyond the northern part of Isla Portillos, often covering an area of around 200 square kilometres. Moreover, these images are charged by unit price per square kilometre, mostly at the rate of US\$28. The Court finds that it would not be reasonable to award compensation to Costa Rica for these images in full. Given the size of the northern part of Isla Portillos, the Court is of the view that a coverage area of 30 square kilometres was sufficient for Costa Rica effectively to monitor and verify Nicaragua's unlawful activities. The Court therefore awards Costa Rica, for each of the invoices in the first and second sets, compensation for one satellite image covering an area of 30 square kilometres at a unit price of US\$28 per square kilometre.

121. With regard to the third set of invoices, the Court considers that Costa Rica has not established the necessary causal nexus between Nicaragua's unlawful activities and the purchase of the satellite images in question.

122. Consequently, the Court finds that Costa Rica is entitled to compensation in the amount of US\$15,960 for the expenses incurred in purchasing the satellite images corresponding to the first and second sets of invoices, within the limits specified in paragraph 120.

123. Thirdly, the Court finds partially compensable Costa Rica's claim for the cost of obtaining a report from UNITAR/UNOSAT dated 8 November 2011. Costa Rica incurred this expense in order to detect and assess the environmental impact of Nicaragua's presence and unlawful activities in Costa Rican territory. The Court has reviewed this UNITAR/UNOSAT report and observes that the analysis given in Section 1 (entitled "Review of dredging activities at divergence of Río San Juan and Río Colorado (maps 2-3)") and in Section 3 (entitled "Review of meander cut sites (maps 5-6)") does not have any bearing on Costa Rica's efforts to detect and assess the environmental damage caused in its territory by Nicaragua. It notes, however, that the analysis given in Section 2, entitled "Updated status of the new channel along [the] Río San Juan (map 4)", provides a technical evaluation of the damage that occurred as a consequence of Nicaragua's unlawful activities in the northern part of Isla Portillos. The Court concludes that Costa Rica has proven that there exists a sufficiently direct and certain causal nexus between the internationally wrongful conduct of Nicaragua identified by the Court in its Judgment on the merits and the purchase of the UNITAR/UNOSAT report.

124. Turning to the quantification of the amount of compensation, the Court notes that Costa Rica has presented evidence in the form of a numbered and dated invoice from UNITAR/UNOSAT, with an annexed cost breakdown, where reference is made to “Satellite-based assessment of environmental and geomorphological changes in Costa Rica”. The invoice for this report, which includes the cost of analysis, satellite imagery, procurement processing of imagery, operating expenses and programme support costs, totals US\$27,339. In light of the fact that only the content of Section 2 of the UNITAR/UNOSAT report is directly relevant, and given that the three sections of the report are separable (in the sense that each section is self-standing), the Court considers that the total amount of compensation should be limited to one-third of the total cost of the report. On that basis, the Court finds that Costa Rica is entitled to compensation under this head of expenses in the amount of US\$9,113.

125. With regard to the other heads of expenses for compensation, Costa Rica’s claims can be separated into three categories: (i) those claims which relate to two new police stations in Laguna Los Portillos and Laguna de Agua Dulce, (ii) those claims which relate to a biological station at Laguna Los Portillos, and (iii) those claims which relate to the salaries of personnel involved in monitoring activities, as well as the ancillary costs of supplying food and water, and the costs of fuel for transportation of ACTo personnel.

126. The Court notes that Costa Rica has made it clear that it does not seek to claim compensation for the construction of the police posts or the biological station. With regard to the first category, however, Costa Rica has advanced a claim for the costs of some equipment, as well as for operational expenses. For the two police posts, Costa Rica claims expenses covering equipment costs (US\$24,065.87), staffing (US\$3,092,834.17), fluvial transportation of personnel and supplies provided by the National Coast Guard (US\$22,678.80); and the purchase of four all-terrain vehicles for the police posts (US\$81,208.40).

127. The Court finds that none of the costs incurred in connection with the equipment and operation of the police stations are compensable because the purpose of the said stations was to provide security in the border area, and not in particular to monitor Nicaragua’s unlawful activities in the northern part of Isla Portillos. Moreover, Costa Rica has not presented any evidence to demonstrate that the equipment purchased and the operational costs were sufficiently linked with the implementation of the provisional measures ordered by the Court.

128. With regard to the second category relating to the biological station, the Court recalls that Costa Rica has claimed expenses covering the cost of a tractor for the equipment and maintenance of the biological station (US\$35,500), the acquisition price of two all-terrain vehicles and

three cargo trailers (US\$42,752.76), and the cost of fuel for the transportation of personnel and supplies (US\$6,435.12).

129. As to the costs incurred in connection with the maintenance of the biological station, the Court similarly finds that none of the expenses incurred under this head are compensable because there was no sufficiently direct causal link between the maintenance of this station and Nicaragua's wrongful conduct in the northern part of Isla Portillos. In particular, the Court observes that in the Report for the Executive Secretariat of the Ramsar Convention on Wetlands, dated July 2013 and entitled "New Works in the Northeast Caribbean Wetland", prepared by the Costa Rican Ministry of Foreign Affairs, it is stated that the purpose of the biological station was to "[c]onsolidate the management of the Northeast Caribbean Wetland through a research program[me]", to "[c]reate an appropriate programme for biological monitoring of the status of existing resources", and to "[c]onsolidate a prevention and control programme to prevent the alteration of the existing natural resources".

130. With reference to the third category, as already explained earlier in the context of similar claims for compensation made by Costa Rica (see paragraphs 101 and 117), the Court does not accept that a State is entitled to compensation for the regular salaries of its officials. With regard to the other two heads of expenses within this category, the Court considers that Costa Rica has not provided any specific information to show in what way the expenses claimed for food and water, and for fuel for transportation of ACTo personnel, were connected with Costa Rica's monitoring of the northern part of Isla Portillos following the withdrawal of Nicaragua's military personnel.

131. In conclusion, the Court finds that Costa Rica is entitled to compensation in the amount of US\$28,970.40 for the expenses it incurred in relation to the monitoring of the northern part of Isla Portillos following the withdrawal of Nicaragua's military personnel and in implementing the Court's 2011 and 2013 Orders on provisional measures. This figure is made up of US\$3,897.40 for the cost of overflights performed by the Air Surveillance Service on 5 and 6 April 2011, US\$15,960 for the purchase, in the period running from September 2011 to October 2015, of satellite images of the northern part of Isla Portillos, and US\$9,113 for the cost of obtaining a report from UNITAR/UNOSAT providing, *inter alia*, a technical evaluation of the damage that occurred as a consequence of Nicaragua's unlawful activities in the northern part of Isla Portillos.

3. *Costs and Expenses Incurred in Preventing Irreparable Prejudice to the Environment (The Construction of a Dyke and Assessment of Its Effectiveness)*

132. According to Costa Rica, it incurred a third category of expenses when implementing the Court's 2013 Order on provisional measures, in

terms of works carried out to prevent irreparable prejudice to the environment of the “disputed territory”. Costa Rica argues that, in accordance with the Order, after consultation with the Secretariat of the Ramsar Convention, it carried out the necessary works on the 2013 eastern *caño* (namely, the construction of a dyke) over a period of seven days, from 31 March to 6 April 2015. Subsequently, Costa Rica carried out overflights of the “disputed territory” in June, July and October 2015 in order to assess the effectiveness of the works that had been completed to construct the dyke across the 2013 eastern *caño*. Costa Rica states that the expenses thus incurred amounted to US\$195,671.02.

133. Nicaragua accepts that compensation may be appropriate for costs reasonably incurred by Costa Rica in 2015 in connection with the construction of the dyke across the 2013 eastern *caño*. It nevertheless argues that the amount of US\$195,671.02 claimed by Costa Rica is inflated because certain materials charged were not actually used for the construction of the dyke and certain overflights were made for purposes unrelated to activities that the Court found to be unlawful. Thus, according to Nicaragua’s evaluation, Costa Rica is entitled to no more than US\$153,517 which represents the real figure for the expenses incurred in connection with the construction of the dyke in 2015.

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134. The Court recalls that in its Order of 22 November 2013 on the request presented by Costa Rica for the indication of new provisional measures, it indicated, in particular, that

“[f]ollowing consultation with the Secretariat of the Ramsar Convention and after giving Nicaragua prior notice, Costa Rica may take appropriate measures related to the two new *caños*, to the extent necessary to prevent irreparable prejudice to the environment of the disputed territory” (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, *Provisional Measures, Order of 22 November 2013, I.C.J. Reports 2013*, p. 370, para. 59, subpara. (2) (E)).

135. From 10 to 13 March 2013, the Secretariat of the Ramsar Convention carried out an onsite visit to the northern part of Isla Portillos to assess the damage caused by Nicaragua’s constructions of the two new *caños*. Following this site visit, in August 2014, the Secretariat produced a report (Ramsar Advisory Mission No. 77) with recommendations on mitigation measures focused on the 2013 eastern *caño*. It requested that Costa Rica submit an implementation plan and recommended that it commence a monitoring programme. In accordance with that request, Costa Rica’s Ministry of the Environment and Energy formulated an implementation

plan, dated 12 August 2014. That plan set out in detail the proposed measures, consisting of the construction of a dyke to ensure that the waters of the San Juan River were not diverted through the 2013 eastern *caño*.

136. Costa Rica proposed to begin works in September 2014 and requested that Nicaragua grant it access to the San Juan River to facilitate the undertaking. Since no agreement had been reached between the Parties, Costa Rica made arrangements to contract a private civilian helicopter for the purposes of the construction works. According to Costa Rica, this was necessary because its Air Surveillance Service did not possess any type of aircraft with the capacity to carry out such works. Costa Rica states that its police and ACTo personnel provided ground support for the operation. The works to construct the dyke were carried out over a period of seven days, from 31 March to 6 April 2015. Costa Rican personnel charged with the protection of the environment monitored the works by means of periodic inspections. Costa Rica also carried out overflights of the northern part of Isla Portillos in June, July and October 2015, in order to assess the effectiveness of the works that had been completed to construct the dyke.

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137. The Court observes that with regard to this category of expenses incurred by Costa Rica, Nicaragua “accepts that compensation may be appropriate for costs that were reasonably incurred”. The Parties however differ as to the amount of compensation owed by Nicaragua to Costa Rica under this head. In particular, Nicaragua asserts that the amount claimed by Costa Rica should be reduced by excluding the cost of surplus materials (which it estimates at US\$9,112.50) and the cost of three overflights (which it estimates at US\$33,041.75) carried out on 9 June, 8 July and 3 October 2015, after the construction of the dyke across the 2013 eastern *caño*. According to Nicaragua, these overflights were, at least in part, “for purposes unrelated to the activities that the Court determined were wrongful”.

138. The Court finds that the costs incurred by Costa Rica in connection with the construction in 2015 of a dyke across the 2013 eastern *caño* are partially compensable. Costa Rica has provided evidence that it incurred expenses that were directly related to the remedial action it undertook in order to prevent irreparable prejudice to the environment of the northern part of Isla Portillos following Nicaragua’s unlawful activities. In this regard, Costa Rica advances three heads of expenses: (i) overflight costs prior to the construction of the dyke; (ii) costs connected with the actual construction of the dyke; and (iii) overflight costs subsequent to the construction of the dyke.

139. With reference to the first head of expenses, Costa Rica states that on 25 July 2014, it hired a private civilian helicopter to conduct a site visit to the northern part of Isla Portillos, in order to assess the situation of the two 2013 *caños* for the purposes of determining the measures required to

prevent irreparable prejudice to the environment of that area. According to Costa Rica, the cost of the flight for this mission amounted to US\$6,183. The invoice submitted by Costa Rica for the cost of this flight indicates that the purpose of the flight was “for transportation of staff on observation and logistics flight to Isla Calero”. The flight description also shows that this flight was nowhere near the construction site. In light of this evidence, the Court considers that Costa Rica has not proven that the 2014 helicopter mission was directly connected with the intended construction of the dyke across the 2013 eastern *caño*. Therefore, the expenses for this flight are not compensable.

140. With reference to the second head of expenses, Costa Rica refers to the costs incurred in terms of the purchase of construction materials and the hiring of a private civilian helicopter to transport personnel and materials required to construct the dyke across the 2013 eastern *caño*.

141. Costa Rica has divided these costs under the second head of expenses into two categories, namely, helicopter flight hours (US\$131,067.50) and “purchase of billed supplies” (US\$26,378.77). With regard to the first category, the Court is satisfied that the evidence adduced fully supports Costa Rica’s claim.

142. In so far as the second category is concerned, the Court is of the view that the purchase of construction materials should, in principle, be fully compensated. With regard to the surplus construction materials, the Court considers that, given the difficulty of access to the construction site of the dyke, located in the wetlands, it was justified for Costa Rica to adopt a cautious approach and to ensure, at the start, that the construction materials it purchased and transported were sufficient for the completion of the work. The costs incurred for the purchase of construction materials which turned out to be more than what was actually used are, in the present circumstances, compensable. What matters, for the consideration of the claim, is reasonableness. The Court does not consider the amount of materials purchased by Costa Rica unreasonable or disproportionate to the actual needs of the construction work.

143. The Court notes, however, that in the “Breakdown of Invoices for Calero — Billed Supplies and Expenses” which gives a total amount of the expenses for the construction of the dyke, Costa Rica included an entry which refers to “Boarding — CNP and El Dólar”, with a claim for compensation totalling US\$3,706.41. It does not provide clarification as to the nature of this expense in any of its pleadings or annexes, including the “Report of works carried out from 26 March to 10 April 2015” prepared by the Costa Rican Ministry of Environment and Energy. The Court thus finds this expense to be non-compensable. The Court also points out that there is a mistake in the calculation of the item “fuel for boat”. Costa Rica is claiming a total of US\$5,936.54 whereas the calcula-

tion of the quantity (5,204) multiplied by the price of the unit (US\$1.07) equals US\$5,568.28. The Court has also corrected other minor miscalculations. Thus the Court, after recalculation, finds that Costa Rica should be compensated in the total amount of US\$152,372.81 for the costs of the construction of the dyke (made up of the cost for the helicopter flight hours in the amount of US\$131,067.50 and the purchase of billed supplies in the amount of US\$21,305.31).

144. With reference to the third head of expenses, the Court recalls that Costa Rica is claiming expenses in connection with overflights made on 9 June, 8 July and 3 October 2015 for the purposes of monitoring the effectiveness of the completed dyke. The Court considers that these expenses are compensable as there is a sufficiently direct causal nexus between the damage caused to the environment of the northern part of Isla Portillos, as a result of Nicaragua's unlawful activities, and the overflight missions undertaken by Costa Rica to monitor the effectiveness of the newly constructed dyke. Costa Rica has also discharged its burden of proof in terms of providing evidence of the cost of flight hours incurred in respect of the hired private civilian helicopter used to access the northern part of Isla Portillos. Costa Rica has submitted three invoices, accompanied by flight data which indicated that the flight route took the aircraft over the dyke. In the Court's view, it is evident that the helicopter hired for these missions had to overfly other parts of Costa Rican territory in order to reach the construction site of the dyke. Moreover, the Court observes that there is nothing on the record to show that these overflights were not en route to the dyke area, nor that the helicopter missions were unrelated to the purpose of monitoring the effectiveness of the dyke.

145. For the flight of 9 June 2015, Costa Rica has produced an invoice in the amount of US\$11,070.75, for the flight of 8 July 2015 an invoice for US\$10,689, and for the flight of 3 October 2015 an invoice for US\$11,282. The Court finds that the total expense incurred by Costa Rica under this head of expenses, totalling US\$33,041.75, is therefore compensable.

146. In conclusion, the Court finds that Costa Rica is entitled to compensation in the amount of US\$185,414.56 for the expenses it incurred in connection with the construction in 2015 of a dyke across the 2013 eastern *caño*. This figure is made up of US\$152,372.81 for the costs of the construction of the dyke, and US\$33,041.75 for the monitoring overflights made once the dyke was completed.

4. Conclusion

147. It follows from the Court's analysis of the compensable costs and expenses incurred by Costa Rica as a direct consequence of Nicaragua's

unlawful activities in the northern part of Isla Portillos (see paragraphs 106, 131 and 146 above), that Costa Rica is entitled to total compensation in the amount of US\$236,032.16.

V. COSTA RICA'S CLAIM FOR PRE-JUDGMENT
AND POST-JUDGMENT INTEREST

148. Costa Rica maintains that in view of the extent of damage Costa Rica has suffered, full reparation cannot be achieved without payment of interest. It claims both pre-judgment and post-judgment interest. With regard to pre-judgment interest, Costa Rica states that such interest should cover its entire compensation for losses it incurred as a direct consequence of Nicaragua's unlawful activities. However, it makes what it considers to be a "conservative claim", whereby pre-judgment interest would accrue from the date of the Court's Judgment on the merits of 16 December 2015 until the date of the Judgment on compensation. As for post-judgment interest, Costa Rica argues that, should Nicaragua fail to pay the compensation immediately after the delivery of the Judgment, interest on the principal sum of compensation as determined by the Court should be added. It proposes that the annual rate of interest be set at 6 per cent for both pre-judgment and post-judgment interest.

149. Nicaragua maintains that an injured State has no automatic entitlement to the payment of interest and specifies that the awarding of interest depends on the circumstances of each case and, in particular, on whether an award of interest is necessary in order to ensure full reparation. Nicaragua observes that Costa Rica has not explained why the circumstances of the present case warrant the award of interest, nor has it attempted to justify the 6 per cent interest rate it requests.

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150. With regard to Costa Rica's claim for pre-judgment interest, the Court recalls that, in its 2015 Judgment, the actual amount of compensation due to Costa Rica was not determined; instead, the Court decided that the Parties were first required to seek a settlement of the question through negotiations. Only in the event that the question was not settled within 12 months could a Party refer it back to the Court for resolution (*Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Judgment, I.C.J. Reports 2015 (II), p. 741, para. 229 (5) (b)). The Court notes, not without regret, that no agreement was reached between the Parties on the question of compensation within the time-limit fixed by the Court. Consequently, at the request of Costa Rica, the matter is now before the Court for decision.

151. The Court recalls that in the practice of international courts and tribunals, pre-judgment interest may be awarded if full reparation for injury caused by an internationally wrongful act so requires. Nevertheless, interest is not an autonomous form of reparation, nor is it a necessary part of compensation in every case (see Commentary to Article 38, Draft Articles on Responsibility of States for Internationally Wrongful Acts, *Yearbook of the International Law Commission*, 2001, Vol. II (Part Two), p. 107).

152. The Court observes that, in the present case, the compensation to be awarded to Costa Rica is divided into two parts: compensation for environmental damage and compensation for costs and expenses incurred by Costa Rica in connection with Nicaragua's unlawful activities. The Court considers that Costa Rica is not entitled to pre-judgment interest on the amount of compensation for environmental damage; in determining the overall valuation of environmental damage, the Court has taken full account of the impairment or loss of environmental goods and services in the period prior to recovery.

153. With regard to the costs and expenses incurred by Costa Rica as a result of Nicaragua's unlawful activities, the Court notes that most of such costs and expenses were incurred in order to take measures for preventing further harm. The Court awards Costa Rica pre-judgment interest on the costs and expenses found compensable, accruing, as requested by Costa Rica, from 16 December 2015, the date on which the Judgment on the merits was delivered, until 2 February 2018, the date of delivery of the present Judgment. The annual interest rate is fixed at 4 per cent. The amount of interest is US\$20,150.04.

154. With regard to Costa Rica's claim for post-judgment interest, the Court recalls that in the case concerning *Ahmadou Sadio Diallo (Republic of Guinea v. Democratic Republic of the Congo)*, the Court awarded post-judgment interest, observing that "the award of post-judgment interest is consistent with the practice of other international courts and tribunals" (*Compensation, Judgment, I.C.J. Reports 2012 (I)*, p. 343, para. 56). The Court sees no reason in the current case to adopt a different approach.

155. Thus, although it has every reason to expect timely payment by Nicaragua, the Court decides that, in the event of any delay in payment, post-judgment interest shall accrue on the total amount of compensation. This interest shall be paid at an annual rate of 6 per cent.

VI. TOTAL SUM AWARDED

156. The total amount of compensation awarded to Costa Rica is US\$378,890.59 to be paid by Nicaragua by 2 April 2018. This amount includes the principal sum of US\$358,740.55 and pre-judgment interest on the compensable costs and expenses in the amount of US\$20,150.04.

Should payment be delayed, post-judgment interest on the total amount will accrue as from 3 April 2018.

* * *

157. For these reasons,

THE COURT,

(1) *Fixes* the following amounts for the compensation due from the Republic of Nicaragua to the Republic of Costa Rica for environmental damage caused by the Republic of Nicaragua's unlawful activities on Costa Rican territory:

(a) By fifteen votes to one,

US\$120,000 for the impairment or loss of environmental goods and services;

IN FAVOUR: *President* Abraham; *Vice-President* Yusuf; *Judges* Owada, Tomka, Bennouna, Cançado Trindade, Greenwood, Xue, Donoghue, Gaja, Sebutinde, Bhandari, Robinson, Gevorgian; *Judge ad hoc* Guillaume;

AGAINST: *Judge ad hoc* Dugard;

(b) By fifteen votes to one,

US\$2,708.39 for the restoration costs claimed by the Republic of Costa Rica in respect of the internationally protected wetland;

IN FAVOUR: *President* Abraham; *Vice-President* Yusuf; *Judges* Owada, Tomka, Bennouna, Cançado Trindade, Greenwood, Xue, Gaja, Sebutinde, Bhandari, Robinson, Gevorgian; *Judges ad hoc* Guillaume, Dugard;

AGAINST: *Judge* Donoghue;

(2) Unanimously,

Fixes the amount of compensation due from the Republic of Nicaragua to the Republic of Costa Rica for costs and expenses incurred by Costa Rica as a direct consequence of the Republic of Nicaragua's unlawful activities on Costa Rican territory at US\$236,032.16;

(3) Unanimously,

Decides that, for the period from 16 December 2015 to 2 February 2018, the Republic of Nicaragua shall pay interest at an annual rate of 4 per cent on the amount of compensation due to the Republic of Costa Rica under point 2 above, in the sum of US\$20,150.04;

(4) Unanimously,

Decides that the total amount due under points 1, 2 and 3 above shall be paid by 2 April 2018 and that, in case it has not been paid by that date, interest on the total amount due from the Republic of Nicaragua to the Republic of Costa Rica will accrue as from 3 April 2018 at an annual rate of 6 per cent.

Done in French and in English, the French text being authoritative, at the Peace Palace, The Hague, this second day of February, two thousand and eighteen, in three copies, one of which will be placed in the archives of the Court and the others transmitted to the Government of the Republic of Costa Rica and the Government of the Republic of Nicaragua, respectively.

(Signed) Ronny ABRAHAM,
President.

(Signed) Philippe COUVREUR,
Registrar.

Judges CANÇADO TRINDADE, DONOGHUE and BHANDARI append separate opinions to the Judgment of the Court; Judge GEVORGIAN appends a declaration to the Judgment of the Court; Judge *ad hoc* GUILLAUME appends a declaration to the Judgment of the Court; Judge *ad hoc* DUGARD appends a dissenting opinion to the Judgment of the Court.

(Initialled) R.A.

(Initialled) Ph.C.
