

*Experts' Responses to Observations of  
The Democratic Republic of the Congo and Uganda  
regarding*

**Case Concerning Armed Activities on the  
Territory of the Congo**

The Democratic Republic of the Congo v. Uganda

\* \* \*

***International Court of Justice***

1 March 2021

## Table of Contents

Introduction	2
Report 1: Response regarding Loss of Life: Direct Deaths (Henrik Urdal)	4
Report 2: Response regarding Conflict-Related Excess Mortality (Debarati Guha-Sapir)	9
Report 3: Response regarding Quantum Recommended Amounts: Human Lives and Property Damage (Geoffrey Senogles)	17
Report 4: Response regarding Exploitation of Natural Resources (Michael Nest)	31

## Introduction

1. This document contains four reports that respond to comments raised by the Democratic Republic of the Congo's (DRC') *Observations of the Democratic Republic of the Congo on the Experts' Report of 19 December 2020* ("The DRC's Observations") and Uganda's *Observations on the Experts Report dated 19 December 2020* ("Uganda's Observations") to *The Experts Report on Reparations for The International Court of Justice. Case Concerning Armed Activities on the Territory of the Congo, The Democratic Republic of the Congo v. Uganda*, dated 19 December 2020 ("the Experts Report").
2. Each report contains the response of a single expert, with an author signature on the final page.
3. Footnotes, paragraph numbers and page numbers run consecutively throughout this entire combined response document and are not distinct to each report.
4. Table A from the *Experts Report - Introduction* has not been revised for this response report. Details of quantities and estimated damages can be found in each expert's report.
5. It remains for the Court to make the legal findings on this matter, including all issues relevant to attribution, if any, and hence to derive its own computations of any awards of damages.



# **Report 1**

## **Response regarding Loss of Life: Direct Deaths**

*Dr. Henrik Urdal*

(Oslo, 1<sup>st</sup> March 2021)

6. This section provides my response to the Court to observations of the Parties (dated 15 February 2021) to my initial report.
7. Serving as a reminder, the terms of reference for my initial report tasked me to provide *a global estimate* of the *lives lost among the civilian population* (broken down by manner of death) due to the armed conflict on the territory of the Democratic Republic of the Congo in the relevant period.
8. My initial report dealt exclusively with direct deaths, that is lives lost as a direct result of armed conflict events that took place in the Democratic Republic of the Congo between 1 August, 1998 and 2 June, 2003.
9. In its comments to my report, Uganda notes that my estimates, based on data from the Uppsala Conflict Data Program (UCDP), an authoritative and independent conflict data provider, are comparable to, and largely consistent with, those undertaken by Uganda in its 2018 Counter-Memorial. I concur with this assessment.
10. My estimates are based on an aggregation of the individual events data provided in the Georeferenced Event Dataset (GED). The source(s) of the slight differences in the overall estimates – my estimates amounted to 28,981 direct deaths of which 14,663 were civilians, while Uganda estimated a total of 29,376 direct deaths of which 14,663 were civilians – are not known (these numbers relate to the whole of DRC for the entire period in question). The deviations may be due to slightly different ways of defining the spatial-temporal domain, or (as noted by Uganda in its response), they may result from updates in the UCDP database.
11. Unlike Uganda, I did in my initial report provide numbers for both civilian and military deaths separately for the Ituri province, which was under de facto control of the army of the Government of Uganda during the period of interest. Uganda does not, in its observations, challenge these numbers.
12. Uganda refers to additional alternative sources of estimates for direct conflict deaths (specifically the Armed Conflict Location and Event Data Project (ACLED) data and the UN Mapping Report). These data sources were not scrutinized in my initial report.
13. Uganda claims that the aggregate numbers identified in these alternative sources do not substantially alter the conclusions of my report. I concur with this assessment.
14. While it is likely that the different datasets, which are collected independently, have been drawing their data from many of the same sources, previous relevant data collection efforts in other conflict settings suggest that there are probably cases that are unique to each dataset. As such, estimates based on one dataset alone is likely to underestimate the true number of casualties, as indicated in the initial report.
15. Although there are multiple relevant data sources available, the absence of individual-level data in these sources makes it impossible to combine the data in order to identify the unique number of victims within and across the sources.

16. Uganda claims in its observations that my report “and recommends that Uganda pay for each and every civilian death during the conflict without regard to whether or not the relevant events” are attributable to Uganda. This is a misrepresentation. The report clearly states that the summary of estimated reparations is based on a calculation of all civilian direct conflict deaths in and outside of Ituri during the relevant period, and that it ‘remains for the Court to make its own legal findings on this matter and hence to derive its own computations of any awards of damages.’ No attribution to Uganda of a particular number of deaths has been made.
17. In its comments on my report, the Democratic Republic of the Congo notes that there is likely underreporting of deaths from relevant armed activities, and that the estimates hence should be considered to be cautious. I concur with this summary. However, it is not possible to provide a sound assessment of how significant this underestimation is.
18. The DRC is further making the claim that my report exclusively concerns civilians and does not include military deaths. This is correct insofar as *the number of deaths used to calculate the basis for reparations exclusively includes civilian deaths* (as per the Terms of Reference for my report). However, the report does include estimates for military deaths occurring both in the DRC as a whole (6,494 deaths) and in the Ituri province (1,036 deaths) for the period of interest, leaving it to the discretion of the Court to consider whether or not such deaths should be subject to reparations.

## Appendix 1.1: Signature of expert

### Signature of expert

This report has been prepared in accordance with the terms of reference set out by the International Court of Justice by Henrik Urdal on 1 March 2021:

Signed:

A handwritten signature in blue ink, appearing to read "Henrik Urdal". The signature is written in a cursive style with a large initial 'H' and 'U'.





## **Report 2**

### **Response regarding Conflict-Related Indirect Deaths**

*Professor (Em.) Debarati Guha-Sapir*

(Brussels, 1<sup>st</sup> March 2021)

19. **Introductory remarks:** I carefully read Uganda’s comments to my report on indirect deaths during 1998 – 2003 in Democratic Republic of Congo (DR Congo) (cf: Guha-Sapir report) and appreciate the content and comments.

20. The main sections in Uganda’s observation were:

- A. *Dr. Guha-Sapir’s “Excess Deaths” methodology is entirely inapposite to these judicial proceedings. (§s 31 – 35)*
- B. *Properly applied, Dr. Guha-Sapir’s Methodology would suggest there were no excess deaths during the relevant period (§s 36 – 40)*
- C. *Dr. Guha-Sapir’s BCDR estimate is outdated. (§h 41 – 43)*
- D. *Dr. Guha-Sapir’s estimate of the PCDR is too high. (§ 44 – 59)*

21. In the following text, I elaborate on and address points raised by Uganda’s response. As most of the remarks revolve around a few main issues, I have responded with reference to the relevant paragraphs (§) from Uganda’s Observations on the experts’ reports dated 19 December 2020. With regard to DR Congo’s Observations, I have no salient remark to make.

#### **Debarati Guha Sapir response to Uganda’s Observations on the Expert Report**

##### **A. General remark on the total indirect deaths for the whole country and part attributed to Uganda.**

22. My first and fundamental remark is on the estimate of 4 985 775 indirect deaths. This estimate is for the whole country through the 5-year period when DR Congo was embroiled in armed unrest across several fronts. The percentage share of the deaths delineated in the Memorial as attributable to Uganda was 45% (Memorial pg.15 §25), and 10% (Memorial pg.49 §64) of the total deaths were considered to be due to violence with most due to “easily preventable and treatable conditions” (Memorial pg. 50 §64). The full references to these metrics are quoted below. It is clear that, should these percentage shares change at a later date, the changes should be appropriately applied to my estimates.

*“1.24. First, it is recalled that a distinction will be made between:*

- *the injury caused by the organs of the Ugandan State themselves – damage for which full reparation will be sought;*
- *the injury caused by the irregular forces supported by Uganda in breach of international law – damage for which full reparation will also be sought, given that, save in exceptional and unforeseeable circumstances, such damage logically stems from that unlawful support, in the sense that it could not have been caused without it; in this instance, it is not a question of attributing the acts of irregular forces to Uganda, but of making reparation for damage which presents an uninterrupted causal link with the wrongful conduct constituted by Uganda’s support for those forces;*
- *the injury caused by the wrongful conduct of both Uganda and other States or groups which were not supported by Uganda – damage for which partial reparation will be sought, taking account of the multiple causes involved; more specifically, in light of the importance of Rwanda’s role in the conflict, and the existence of the – more limited – role played by Burundi,*

*the DRC finds it reasonable that Uganda could be obliged to make reparation for only 45 per cent of the damage falling into this category.”*

- *Extracted from Memorial pg. 15, §25*

- *“2.64. Most of the studies carried out after the end of the conflict have served to confirm these findings. The International Rescue Committee puts forward a total of 3.9 million deaths, making the war in the Congo the deadliest crisis since the Second World War: 3.9 million had died since 1998, arguably making DR Congo the world’s deadliest crisis since World II. Less than 10 per cent of all deaths were due to violence, with most attributed to easily preventable and treatable conditions such as malaria, diarrhea, pneumonia and malnutrition”*

- *Extracted from Memorial pg. 49 – 50, §64*

23. I presented my estimate for the Eastern DR Congo and applied the percent shares according to the Memorial. When using coefficients from the Memorial, 224 449 deaths were attributable to armed action for the whole country. The establishment of the share of the mortality by distinct perpetrators is not in my Terms of Reference. This is documented in Table 2.2 of the Expert Report (§ 66, page 28), see below a simplified extract.

*Simplified extract from Expert Report 2 Table 2.2 page 28: Applying DRC coefficients from the Memorial to mortality in Ituri, Eastern DRC, and DRC, 1998-2003*

	<b>Ituri</b>	<b>Eastern</b>	<b>DRC</b>
<b>Indirect civilian deaths</b>	390 668	3 690 130	4 958 775
<b>45% * 10% = 4.5% of total excess deaths</b>	18 048	167 088	224 449

1.1.1. In view of this above explanation, the following assertions by Uganda are incorrect:

1.1.2. Page 13 and 14, § 29, point 5: *“The amount of reparations recommend for indirect deaths in Table A of the Experts Report improperly assumes that Uganda is responsible for all the deaths attributable to the conflict.”*

1.1.3. Page 14, § 29, point 6: *“Awarding reparation for indirect deaths anywhere near the amount stated in the Experts Report would be ultra petita, as it would far exceed what was requested by the DRC.”*

## **B. Contestation of methodology.**

24. Uganda’s arguments coalesce around the contestation of two main parameters used for the estimation of indirect mortality, namely the choice of baseline (BCDR) and the use of small-scale surveys.

### ***B.1 Choice of crude death rate baseline (BCDR).***

25. Uganda suggests that baseline crude death rate (BCDR) and posterior crude death rate (PCDR) are fraught with uncertainties (§ 32). First, the choice of baseline will influence the number of indirect

deaths. The higher the baseline, the lower the indirect deaths and vice versa. I have used a value for BCDR provided by UNICEF for 1997 and complies with the suggestion by Uganda to use UN sources. It is also information that is available in the public domain.

26. UNICEF reported a BCDR value of 14/1000/year compared to the BCDR cited by Uganda – 16/1000/year. If we use 16/1000/year as the baseline as cited by Uganda, this reduces my original number of all indirect deaths (4.9 million) by 5.8%, or 288 460 fewer deaths.
27. I used UNICEF estimates presented for 1997 one year before the war began in 1998. I feel that this baseline more closely reflects the reality of the situation compared to projections made later (2019).

### ***B.2 Use of small-scale surveys to estimate prevailing death rates.***

28. Uganda states that documentary evidence should be used to establish indirect mortality in Eastern DRC during the 1998 - 2003 or the Second Congo War using sources such as mortuary records, death certificates, sources from civil registration or vital statistics records (§31 – 35): *“She does not ‘demonstrate or ‘prove’ any deaths. She does not directly rely on any death certificates or any other documentary evidence for that matter.”*
29. While this is a desirable scenario in situations where all deaths are systematically captured by a well-maintained death registration system in the public domain, this is essentially a non-starter in Eastern DRC between 1998 – 2003. The data sources that Uganda proposes (i.e., death certificates, mortuary records, and CRVS) are notoriously biased and grossly underestimate the real death toll even in the best circumstances in African countries<sup>1, 2</sup>. In 2017, United Nations Statistical Division (UNSD) reported having no death registration data from DR Congo at all.<sup>3</sup> The BBC reported that, “In 14 countries a maximum of only one in 10 deaths are recorded, including in Nigeria, the Democratic Republic of Congo and Cameroon.”<sup>4</sup> Death registration records are patently not a reliable source if it is a source at all in the conflict-ridden zone of Eastern DRC. Even if there were a functioning death registration office in Eastern DRC during the war, the reality, as Uganda realises, is that the cost of transporting the deceased as well as registration cost would far exceed not only the resources for most families in the region but would bring nothing of substance to the family for doing so.
30. In order to illustrate the importance of the use of documentary evidence, Uganda cites an example of an International Criminal Court (ICC) case (§ 30, reference 43). This was a case brought against Germain Katanga, where he was found guilty of one count of crime against humanity (murder) and four counts of war crimes (murder, attacking a civilian population, destruction of property and pillaging) committed on 24 February 2003 during the attack on the village of Bogoro, in the Ituri district of the DRC” (ICC).<sup>5</sup>
31. The ICC is an intergovernmental organization and international tribunal that tries a single named individual for war crimes, genocide, crimes against humanity, and aggression. The ICJ, one of the

---

<sup>1</sup> Osman Sankoh et al, The Lancet Global Health [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(19\)30442-5/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(19)30442-5/fulltext)

<sup>2</sup> Setel, Macfarlane et al <https://www.unhcr.org/4b0ba6e39.pdf>, [www.thelancet.com](http://www.thelancet.com). Published online October 29, 2007. DOI:10.1016/S0140-6736(07)61307-5

<sup>3</sup> <https://unstats.un.org/unsd/demographic-social/crvs/>

<sup>4</sup> Measuring Africa’s Data Gap: The cost of not counting the dead, BBC, 23 February 2020 <https://www.bbc.com/news/world-africa-55674139?xtor=AL-72-%5Bpartner%5D-%5Bmicrosoft%5D-%5Blink%5D-%5Bnews%5D-%5Bbizdev%5D-%5Bisapi%5D>

<sup>5</sup> *Prosecutor v. Germain Katanga*, Case No. ICC-0104-01/07, Case Information Sheet, (ICC Trial Chamber II, Updated 20 March 2018). Available from: <https://www.icc-cpi.int/CaseInformationSheets/KatangaEng.pdf>

six principal organs of the UN, deals with disputes at the level of countries in accordance with international law and gives advisory opinions on international legal issues.

### ***B.3 Appropriateness of small-scale surveys and citations from my academic articles on small-scale survey limitations***

32. Uganda questions small-scale surveys as an appropriate source of mortality data for DRC and for Eastern DRC, in particular. These surveys use standardised methods, developed by the SMART survey group and well-validated in the field. Experts from UNICEF, US Centres for Disease Control and renowned academics designed this methodology for Disease Control and Prevention.
33. The methodology I have used minimises concerns raised about the use of small-scale surveys. For example, the allegations of level of uncertainties made by Uganda in §28 and 32 are not valid. My estimation of the PCDR defines the uncertainty limits in a clear and transparent way. I note that the CDR projections from the UN, recommended by Uganda, do not provide confidence intervals and therefore do not provide measures of uncertainty. In contrast, my estimations for the conflict period do present the confidence intervals and a measure of uncertainty. Small-scale surveys provide precision levels, which are provided by neither documentary evidence nor UN projections.
34. In § 47 Uganda claims that the 38 surveys used to make my estimation of indirect deaths are not independent and were conducted mostly by the same advocacy group. Although the surveys were conducted occasionally by the same humanitarian organization, the statistical understanding of independence prevail in the methodology. The sample size and selection of observations from each geographical/health zone are independent of the other — this is a standard practice in survey sampling. The organizations that conducted the surveys are among the most credible in conducting small scale surveys and some of them have been supervised by professors from prestigious universities of the world. With a team of renowned experts in the field and many years of experiences in the field, I strongly believe that these surveys are statistically sound and properly done.

### ***B.4 Applied properly, Dr. Guha-Sapir's methodology would suggest there were no excess deaths during the relevant period (§ 36 – 40).***

35. Uganda claims that deaths may have actually reduced during the Second Congo War which is an implausible assertion. Accounts from UN and many other reliable sources describe the opposite of this scenario. Further, Uganda claims that people in Eastern DR Congo were living a better life during the war than they did before, in part, per Uganda's claim, due to the influx of international humanitarian aid. This assertion does not reflect the circumstances on the ground during the Second Congo War.
36. Humanitarian aid for the Second Congo War was mainly for the refugees who had arrived in Eastern DRC from Rwanda and not for the local population. In addition, it is widely acknowledged that much of it was either misdirected or not deployed at all due to security concerns.<sup>6</sup> Many humanitarian agencies including Medecins sans frontiers (MSF), who provide services in zones of violent conflict and are listened to carefully by UN instances, actually left the zone in protest against the massive leaks in aid. The UNHCR Annual Protection Report 1998 states "By the year end [1998] the Eastern DRC remained inaccessible to UN personnel for all practical

---

<sup>6</sup> Lischer, SK (2003). Collateral Damage: Humanitarian Assistance as a Cause of Conflict. *International Security* 28(1), 79 – 109. <http://www.jstor.org/stable/4137576>

purposes." <sup>7</sup> Eastern DRC in this period was out of bounds for most humanitarian workers and international officials could not enter the zone without UN armed escorts. It is more than unlikely that the conditions for the local population during the war actually improved during the Second Congo War and the assertion that aid helped reduce death rates of the local population is inexplicable.

**C. Final remarks.**

37. The arguments put forth by Uganda are often ingenuous, misleading and redundant. However, I have substantively clarified the concerns raised by Uganda in a transparent manner.
38. In summary, my estimate of 4.9 million excess indirect deaths is for the entirety of the country from all causes. My Terms of Reference do not ask me to assign indirect deaths to specific perpetrators. As described above (Section A, page 2, Table 2.2 and accompanying text), if the percent shares put forward in the Memorial are used, I come to a total of 167 088 excess indirect deaths in Eastern DRC and 18 048 excess indirect deaths in Ituri during 1998 - 2003.

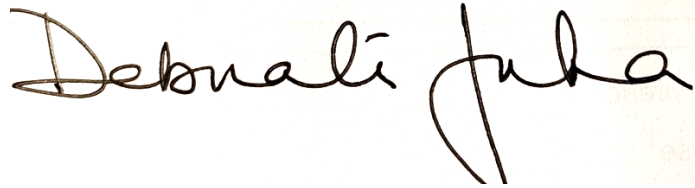
---

<sup>7</sup> UNHCR, Center for Documentation and Evaluation, Democratic Republic of the Congo: 1998 Annual Protection Report

## Appendix 2.1: Signature of Expert

### Signature of expert

This report has been prepared in accordance with the terms of reference set out by the International Court of Justice by Debarati Guha Sapir on 1 March 2021:

A handwritten signature in black ink on a light-colored background. The signature is written in a cursive style and reads "Debarati Guha".

Signed:





## **Report 3**

# **Response regarding Quantum Recommended Amounts: Human Lives and Property Damage**

*Geoffrey Senogles*

(Nyon, 1<sup>st</sup> March 2021)

## SECTION: Injury to persons

39. In this section, I provide the Court with my responses to comments made by the DRC and Uganda in the Parties' respective written observations, both of which were dated 15 February 2021.
40. My comments in this section are addressed to the Court.
41. In essence: The DRC provides observations arguing that my recommended compensation amounts are too low, while Uganda provides observations arguing that my recommended compensation amounts are too high.
42. At the outset of this section, I can highlight that it is my very clear understanding that it is the Court (and only the Court) which makes findings as to which claimed losses are compensable and as to the amount of any compensation to be awarded, if any. It is for the Court – absolutely – to receive and consider my opinions in writing and orally, and thereafter to decide to what extent, if at all, to be assisted in their deliberations by my opinions. My role is limited – I know that and I am very well aware and am respectful of those limitations.
43. Contrary to what is stated by Uganda<sup>8</sup>, it is not stated in my report and it is not my opinion that the individual compensation figures recommended in my section of our report dated 20 December 2020, should be applied by the Court across all alleged victims. Uganda choose not to quote my report but rather to misunderstand or mischaracterise my report by stating "... he recommends the following fixed amounts for *all alleged victims* of the various injuries claimed by the DRC" [italics as used in Uganda's text].
44. This form of words chosen by Uganda is not a quotation from my report – and in any event, it is quite simply incorrect. It does not express my opinion.
45. Rather, the individual amounts recommended in relation to injury to persons<sup>9</sup>, are intended for consideration by the Court in respect of only those lives found by the Court to have been lost or impacted by events found by the Court to be attributable to Uganda. I express no opinion or make no comment on any such findings by the Court.
46. Furthermore I can refer the Court here, as I will repeatedly, to paragraph 12 of our report dated 20 December 2020 in which we made our guiding principle clear right at the start, indeed in the third substantive paragraph of our report, that "[i]t remains for the Court to make its own legal findings on this matter and hence to derive its own computations of any awards of damages."<sup>10</sup>
47. Both the DRC and Uganda make observations on the UNCC as having been referenced by me in our report dated 20 December 2020.
48. In the DRC's Observations<sup>11</sup>, the applicability of UNCC valuations is questioned even though the paragraphs in my report cited by DRC<sup>12</sup>, themselves describe the referencing of UNCC awards as benchmarks in the DRC Memorial<sup>13</sup>.

---

<sup>8</sup> Uganda Observations dated 15 February 2021, para. 69.

<sup>9</sup> Experts' Report dated 20 December 2020, summary table at para. 139.

<sup>10</sup> Experts' Report dated 20 December 2020, para. 12.

<sup>11</sup> DRC Observations dated 15 February 2021, para. 35.

<sup>12</sup> Experts' Report dated 20 December 2020, paras. 137 and 138.

<sup>13</sup> Experts' Report dated 20 December 2020, para. 137, footnote 64 citing the DRC Memorial para. 3.24.

49. The DRC argues that use of the UNCC goes against the Congolese courts' practice of not fixing the amount of compensation awarded by reference to the act<sup>14</sup>.
50. It is not my opinion, as the DRC queries "Why would the valuations of the UNCC alone be reasonable?"<sup>15</sup> and I will return to this topic later in this section. In my view, the Court has the challenge of making its findings in respect of a wide range of individuals allegedly impacted and a range of types of personal loss. In these circumstances, it is my recommendation to the Court to adopt fixed compensation amounts per person to be applied to each instance of each type of loss found to be attributable to Uganda – and as attribution is a legal issue, I have no opinion.
51. In my role as independent expert appointed by the Court, I endorse the point that the Court will make its own findings on valuation, if any, based on the evidence, on the opinions and on the methodologies that the Court has before it and which the Court finds to be relevant and reliable. To this end, it appears reasonable that the UNCC (alone) or indeed any single basis could be found by the Court as being inadequate. This is for the Court to decide.
52. It remains my view that the UNCC compensation amounts in respect of injury to persons represent useful guides to the Court, in its deliberations on compensation awards, if any.
53. In all instances, and fundamental to my opinions, each individual compensation amount recommended in my report is lower than or equal to the DRC claimed amount. To recommend individual compensation amounts higher than those claimed would be inappropriate.
54. In Uganda's observations, they appear to argue that the UNCC has no relevance and therefore should not be considered by the Court<sup>16</sup>. I do not share this view but rather I am of the opinion that the UNCC provides the Court with a useful, timely and relevant military reparation claims experience and decisions on compensation in respect of similar nature of losses claimed. The UNCC is by no means suggested as the benchmark, but rather, as a potentially useful guide for consideration by the Court.
55. Contrary to what Uganda states<sup>17</sup>, the UNCC remains in operation today and I can also comment that my own personal experience of working inside the UNCC claims assessment processes does not accord with Uganda's description of the work practices as taken from a 2 May 1991 statement in the name of the United Nations Secretary General; a report made exactly two months after the official ceasefire date of 2 March 1991 and before the UNCC's work had begun<sup>18</sup>. As but one example, during my time on staff, I was involved in several UNCC oral proceedings in which Iraq and claimants appeared along with their external legal representatives and expert witnesses.
56. Uganda considers the Eritrea-Ethiopia Claims Commission ("EECC") to be "*a more relevant precedent*"<sup>19</sup> than the UNCC.
57. In respect of evidentiary requirements, Uganda goes on to describe the EECC in the following terms: "***Following the traditional approach of requiring convincing evidence establishing the existence of harm and its valuation to a high level of certainty, the EECC relied on and closely analysed large amounts of specific, corroborated evidence, including: documentary evidence; medical and hospital records; receipts of expenditures; photographs and satellite imagery; and***

<sup>14</sup> DRC Observations dated 15 February 2021, para. 39.

<sup>15</sup> DRC Observations dated 15 February 2021, para. 35.

<sup>16</sup> Uganda Observations dated 15 February 2021, for example para. 68.

<sup>17</sup> Uganda Observations dated 15 February 2021, para. 72.

<sup>18</sup> Uganda Observations dated 15 February 2021, para. 71 and footnote 125.

<sup>19</sup> Uganda Observations dated 15 February 2021, para. 74.

**signed and sworn declarations.** Uganda considers it surprising that, having taken it upon himself to look beyond the Court's Terms of Reference, Mr Senogles focused only on the UNCC and took no account of the more pertinent experience from the EECC.<sup>20</sup> **[my emphasis added]**

58. To this end, so as to assist the Court I am more than willing to refer to the EECC's final award on damages, which was dated 17 August 2009<sup>21</sup>.
59. The Court will be aware that the EECC included specific commentary on its evidentiary requirements, taking into account the circumstances faced by Eritrea and Ethiopia. With this in mind and even though the following quotes are lengthy, I include them here in full since they are pertinent to this issue raised by Uganda:

*“35. At the liability phase, the Commission required clear and convincing proof of liability. It did so because the Parties' claims frequently involved allegations of serious—indeed, sometimes grave—misconduct by a State. A finding of such misconduct is a significant matter with serious implications for the interests and reputation of the affected State. Accordingly, any such finding must rest upon substantial and convincing evidence. This is why the International Court of Justice and other international tribunals require that facts be established with a high degree of certainty in such circumstances.*

*36. In the hearings on the Group Number One damages claims, Ethiopia argued that decisions relating to damages should be based on the preponderance of the evidence. Eritrea urged that the Commission continue to utilize a standard of “clear and convincing” evidence. Like some other courts and tribunals, the Commission believes that the correct position lies in an amalgam of these positions. **The Commission has required clear and convincing evidence to establish that damage occurred, within the liability parameters of the Partial Awards. However, for purposes of quantification, it has required less rigorous proof.** The considerations dictating the “clear and convincing standard” are much less compelling for the less politically and emotively charged matters involved in assessing the monetary extent of injury. **Moreover, the Commission recognizes the enormous practical problems faced by both Parties in quantifying the extent of damage following the 1998–2000 war. Requiring proof of quantification of damage by clear and convincing evidence would often—perhaps almost always—preclude any recovery.** This would frustrate the Commission's agreed mandate to address “the socio-economic impact of the crisis on the civilian population” under Article 5(1) of the Agreement.*

*37. The present task is not to assess whether the two State Parties committed serious violations of international law. That has been done. Now, the Commission must determine, insofar as possible, the appropriate compensation for each such violation. **This involves questions of a different order, requiring exercises of judgment and approximation. As discussed below in connection with particular claims, the evidence regarding such matters as the egregiousness or seriousness of the unlawful action, the numbers of persons injured or property destroyed or damaged by that action, and the financial consequences of such injury, destruction or damage, is often uncertain or ambiguous. In such circumstances, the Commission has made the best estimates possible on the basis of the available evidence. Like some national courts and international legislators, it has recognized that when obligated to determine appropriate compensation, it must do so***

---

<sup>20</sup> Uganda Observations dated 15 February 2021, para. 75.

<sup>21</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, volume XXVI, pp. 631-770. Available at: [https://legal.un.org/riaa/cases/vol\\_XXVI/631-770.pdf](https://legal.un.org/riaa/cases/vol_XXVI/631-770.pdf)

*even if the process involves estimation, or even guesswork, within the range of possibilities indicated by the evidence. Nevertheless, in some cases the evidence has not been sufficient to justify any award of compensation.*

38. *The Commission also has taken account of a trade-off fundamental to recent international efforts to address injuries affecting large numbers of victims. **Institutions such as the United Nations Compensation Commission (“UNCC”) and various commissions created to address bank, insurance and slave labor claims stemming from the Nazi era have adopted less rigorous standards of proof, either to show that an individual suffered injury or regarding the extent of that injury. As a trade-off, compensation levels also have been reduced, balancing the uncertainties flowing from the lower standard of proof.** While the claims addressed in this Award are State claims, not mass claims, the Commission has in some instances applied similar analysis with respect to claims for injuries or damages that were suffered by large, but uncertain, numbers of victims and where there is limited supporting evidence.”<sup>22</sup> [my emphasis added]*

60. The Congolese courts’ awards<sup>23</sup>, at least to the limited extent presented and evidenced in the DRC Memorial, give the appearance of awarding higher individual amounts than the individual amounts as claimed by the DRC. Therefore, due to their lack of substantiation, and their values being higher than the relevant claimed amounts, in my opinion the Congolese court’s awards should not be persuasive in the Court’s own deliberations.
61. In my report, I have addressed the individual claim amounts for loss of life and also personal injury claims so as to provide assistance to the Court. As referred to in our report<sup>24</sup>, we fully recognise that it is entirely within the Court’s judicial discretion as to whether and/or to what extent, to have any regard to my opinions in this regard. The Court has complete discretion as to whether or not consider my opinions on any personal losses claimed.
62. To be clear: My report sections do not in any way address the numbers of individuals affected by loss of human life, injury, rape, child soldier, or population flight. Some of those issues are covered by my colleagues Dr Henrik Urdal and Dr Debarati Guha Sapir. It will be for the Court to make its findings on the numbers of individuals affected, if any, to which the Court may then choose to apply per person dollar compensation amounts, if any, in order to derive total compensation amounts, if any. All such decisions and calculations, if any, are entirely matters for the Court.
63. As a separate matter, and again for the avoidance of doubt, the Court will have already noted that my report sections make no comment whatsoever as to whether any individuals were impacted by acts that the Court finds to be attributable to Uganda – which is a legal matter for the Court.
64. In its Final Award – Ethiopia’s Damages Claim, the EECC took an approach to compensation for loss of life and for injuries that resulted in findings of round sum awards of compensation applicable to defined groups of affected individuals, without always specifying the number of individuals involved due to the previously mentioned and already quoted evidentiary constraints which had been accepted by the EECC as “*enormous practical problems*” faced by Eritrea and Ethiopia<sup>25</sup>.

---

<sup>22</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, paras. 35-38.

<sup>23</sup> As referred to in some detail in the Uganda Observations dated 15 February 2021, para. 62.

<sup>24</sup> Experts’ Report dated 20 December 2020, para. 12.

<sup>25</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, para. 36.

65. By way of example, the following paragraph quoted in full illustrates the approach taken by the EECC to making its findings on compensation:

*“e. Award*

*103. Given the manner in which Ethiopia presented its claims, the Commission has had to make its best estimates of the gravity and extent of Eritrea’s jus in bello violations on the three fronts involving death, physical injury, disappearance, forced labor and conscription of civilians based on the evidence previously in the record. In doing so, it has given important weight to the seriousness of the offenses against life and human dignity proved at the liability phase. Based on its analysis of the evidence, the Commission awards Ethiopia US\$11,000,000 in respect of these claims.”<sup>26</sup>*

66. In related previous paragraphs, in which the EECC set out its analysis of the claim components and evidence made available, details were not provided as to how the round sum award amount of USD 11,000,000 was calculated – either in terms of precise numbers of individuals in each category of loss (i.e. a, killings; b, beatings and woundings; c, abductions and disappearances; d, forced labor and conscription) or of each per person award amount in respect of each type of loss<sup>27</sup>.

67. Similarly, in respect of alleged rape, the EECC made the following award:

*“109. Despite the shortcomings of both Parties’ damages methodologies, the Commission considers that this serious violation of international humanitarian law demands serious relief. Neither symbolic nor nominal damages will suffice in the face of the physical, mental and emotional harm known to be suffered by rape victims.*

*110. Accordingly, the Commission awards Ethiopia (as it does Eritrea in its parallel Award) US\$2,000,000 in damages for failing to prevent the rape of known and unknown victims in Irob, Dalul and Elidar Weredas. In so doing, the Commission expresses the hope that Ethiopia (and Eritrea) will use the funds awarded to develop and support health programs for women and girls in the affected areas.”<sup>28</sup>*

68. This methodology used by the EECC, deriving round sum compensation amounts in respect of a given group of impacted individuals<sup>29</sup>, is not available to me as a basis for my recommendations to the Court. The reason for this is straightforward – **my opinions do not deal with the numbers of individuals allegedly impacted by Uganda, if any**. My opinions only cover ‘per person’ dollar amounts that the Court may consider as per person compensation amounts as part of the Court’s overall deliberations.

69. Thus, it will be for the Court to make its own findings in a two-step process on the amount, if any, to award in respect of each individual impacted, if any, by acts or omissions, if any, found by the Court to be attributable to Uganda – a sentence which necessarily contains several ‘if any’ qualifying clauses.

---

<sup>26</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, para. 103.

<sup>27</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, paras. 82-102.

<sup>28</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, paras. 109-110.

<sup>29</sup> Which in my view is not an unreasonable methodology.

70. Uganda refers to the UNCC's Category B Claims as being more relevant to the (lower) evidence provided in support of the DRC claims in this regard<sup>30</sup>. Uganda however continues by clarifying that: " ... in Uganda's view, even the amounts corresponding to Category B claims could not be transposed to this case because the DRC has not even met the comparatively lower evidentiary standards the UNCC used for this category, to include the name of the victim, his or her nationality, and the date of the injury or death."<sup>31</sup>
71. Under its Category B, the UNCC awarded maximum amounts of either USD 10,000 to the family of a deceased person or USD 2,500 for individuals – and these are quoted by Uganda<sup>32</sup>.
72. As stated in our previous report<sup>33</sup>, my general opinion on the documentary evidence provided by the DRC is that relatively poor evidence has been provided to the Court. Uganda approvingly includes extensive quotes from my opinions on this topic in its latest Observations submitted to the Court<sup>34</sup>. My opinions on the evidence provided by the DRC are based on my experience in legal dispute resolution since 1995 and are expressed in plainly put, impartial language.
73. The DRC individual claim forms<sup>35</sup> that I have seen do go some way towards substantiating the identity, the nature and value of losses claimed. They cannot however be described by an independent professional as being anywhere near perfect or ideal evidence for use in legal proceedings.
74. Of direct relevance to this issue, I refer the Court back to a previously quoted paragraph from the EECC Final Damages Award which warrants repeating:
- "37. The present task is not to assess whether the two State Parties committed serious violations of international law. That has been done. This involves questions of a different order, requiring exercises of judgment and approximation. **As discussed below in connection with particular claims, the evidence regarding such matters as the egregiousness or seriousness of the unlawful action, the numbers of persons injured or property destroyed or damaged by that action, and the financial consequences of such injury, destruction or damage, is often uncertain or ambiguous. In such circumstances, the Commission has made the best estimates possible on the basis of the available evidence. Like some national courts and international legislators, it has recognized that when obligated to determine appropriate compensation, it must do so even if the process involves estimation, or even guesswork, within the range of possibilities indicated by the evidence. Nevertheless, in some cases the evidence has not been sufficient to justify any award of compensation.**" [my emphasis added]*
75. In my role as independent expert to the Court, I remain at the disposal of the Court to assist by discussing this issue during the oral hearing.
76. On grounds that only limited documentary evidence has been presented by the DRC, there may exist a reasonable basis for the Court to make a finding that awards a lower amount - of say, USD 10,000 in line with the UNCC's lower evidence threshold Category B award amount referred to by Uganda - to the family of a deceased person who was killed in a targeted action attributable to Uganda (Note; attribution is a legal issue on which I have no opinion), rather than an amount of USD 30,000 as recommended in my previous report.

---

<sup>30</sup> Uganda Observations dated 15 February 2021, para. 91.

<sup>31</sup> Ibid.

<sup>32</sup> Uganda Observations dated 15 February 2021, para. 90.

<sup>33</sup> Experts' Report dated 20 December 2020.

<sup>34</sup> Uganda Observations dated 15 February 2021, for instance in para. 62 on pages 29-32.

<sup>35</sup> Known as 'victim identification forms'.



77. To be clear however, my view remains that by taking into account evidentiary constraints likely to have been faced by Congolese individuals completing their ‘victim identification forms’ – not dissimilar to EECC’s evidentiary problems faced by the two relevant states in that action and as was directly addressed by the EECC (as referred to above) – an amount of USD 30,000 in compensation for the death of an individual deliberately targeted in military actions is reasonable for consideration by the Court. The deliberations of the Court will require a judicial assessment of the Court’s own evidentiary thresholds in this matter – and I remain available to provide assistance if requested.

#### **SECTION: Property damage**

78. The DRC expresses concerns with the use of the various percentage “discount factors” used in my report to adjust downwards the claimed amounts to account for evidentiary deficiencies observed<sup>36</sup>.
79. Similarly, Uganda expresses concerns on the same topic<sup>37</sup>.
80. My methodology adopted is reasonable, reasoned and a standard practice in claims assessments in similar circumstances.
81. I have reviewed the evidence and based thereon I have derived my own recommended adjustments (using a percentage deduction approach<sup>38</sup>) based on my experience, and in the absence of any prescribed methodology or guidelines that had been previously created by the Court for use in this matter.
82. By way of illustrative examples from the EECC precedent that Uganda has referred the Court towards as being “more pertinent”<sup>39</sup>, in the following paragraphs I list a selection of percentage-based evidentiary adjustments made by the EECC (without specifying the calculated basis of each percentage found to be applicable) to cure evidentiary gaps when arriving at their awards of compensation for claimed property losses.

*“144. The engineering survey documenting the extent of physical damage to Zalambessa estimated the costs of repair and reconstruction of churches, houses and various public buildings as of December 2000 to be 149,441,206 birr. As noted above, a senior Ethiopian public works official projected that the actual costs of reconstruction after December 2000 would be higher, because of post-war increases in construction costs. In determining compensation for Eritrea’s claims for damage to or destruction of a large number of identified buildings, the Commission has taken account of documented post-war shifts in exchange rates and increases in construction costs in Eritrea. In order to treat the Parties equally, it should accord similar treatment to Ethiopia’s claim. **As the record did not clearly indicate the amount of post-war increases in construction costs in Ethiopia, the Commission estimates them to have been 20%. Increasing the December 2000 engineering study’s estimate by 20% equals 179,329,400 birr. The Commission awards 75% of this amount, or US\$16,815,000, as compensation for damage to and destruction of buildings in Zalambessa in violation of the jus in bello.**”<sup>40</sup>*

---

<sup>36</sup> DRC Observations dated 15 February 2021, para. 81.

<sup>37</sup> Uganda Observations dated 15 February 2021, for instance, para. 107.

<sup>38</sup> For instance, a relatively ‘good’ file of evidence may derive a 10% evidentiary discount factor, as compared to a relatively ‘poor’ file of evidence may derive a 50% evidentiary discount factor.

<sup>39</sup> Uganda Observations dated 15 February 2021, para. 75.

<sup>40</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, para. 144.

“149. Ethiopia claimed US\$107,355 for a Rubb hall (a portable grain storehouse) looted from the Relief Society of Tigray. The evidence showed that the Rubb hall was originally donated by Catholic Relief Services in 1993, and was placed on the Society’s books in that year at an initial value of 858,840 birr. **Given that the property was several years old at the time of its loss, the Commission awards 80% of the amount claimed, or US\$86,000.**”<sup>41</sup>

“ 150. Ethiopia claimed US\$167,578 for property looted from the Tigray Regional Agriculture Bureau following the invasion of Zalambessa. The valuation was based on the declaration of a senior Agricultural and Natural Resources Development Office official and accompanying lists of property lost at several locations. The official stated that the lists were “compiled based on estimates of the value and inventory of these items as of the time of the war,” but did not state a value of property allegedly looted in Zalambessa. The accompanying tables appeared to be based on the authorized levels of supplies, not on amounts actually on hand. They also listed some supplies lost from Badme (and perhaps also other locations) as well as from Zalambessa. The claimed losses do not appear unreasonable in the circumstances. **However, as the evidence was based on estimates (albeit by a knowledgeable official), and was imprecise in other respects, the Commission awards 75% of the claimed amount, or US\$126,000.**”<sup>42</sup>

“151. Ethiopia alleged that Eritrea looted construction machinery and material being used by the Tigray Regional Rural Roads Authority in the Zalambessa area at the outbreak of the war, to the value of US\$1,132,694. More than half of this claim was for the original acquisition cost of three bulldozers and two dump trucks allegedly looted. There was no evidence showing that this machinery and material actually was taken by Eritrea; there was evidence showing that, prior to the war, much of it was stored in a facility several kilometers south of Zalambessa. Road building material and heavy construction equipment would have been equally valuable to both armies for building trenches and other military engineering works on the static Zalambessa front. In this regard, there was uncontested evidence that both armies were using bulldozers to dig trenches in the Zalambessa area in mid-May 1998, prior to Eritrea’s attack. **Given the ambiguities of the evidence, the Commission awards Ethiopia the dollar equivalent of 50% of the amount claimed, or US\$566,000.**”<sup>43</sup>

“152. Finally, Ethiopia claimed US\$3,269 for looting of tables, chairs, a tennis table and rackets, and a pool table from the office of the Tigray Youth Association. **While the evidence for this claim was limited, the character and amount of the claim appear reasonable in the circumstances. The Commission accordingly awards US\$3,000 in respect of this claim.**”<sup>44</sup>

83. In circumstances in which full and proper documentary evidence has not been provided by a claimant, in my view and in my experience it is incumbent on a court, tribunal or arbitrator to make their findings on quantum after taking into account at least two relevant issues:
- a. The extent of the evidentiary deficiency when measured against what the court/tribunal would expect to see as ‘normal’ evidence.

---

<sup>41</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, para. 149.

<sup>42</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, para. 150.

<sup>43</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, para. 151.

<sup>44</sup> Eritrea-Ethiopia Claims Commission - Final Award - Ethiopia's Damages Claims, 17 August 2009, para. 152.

- b. Reasons or prevailing circumstances, if any, justifying or explaining the deficiency in evidence provided.

84. I remain of the view that my recommended methodology of adjusting the DRC's various property loss claims to account for deficient evidence produced is appropriate for due consideration and weighting by the Court.
85. It is entirely within the Court's discretion to make its own findings as to the Court's own views of the evidence provided by the DRC, and hence to impose the Court's own evidentiary adjustment in deriving an individual compensation amount, if any.
86. In the event that the Court finds that a claim is not supported to any extent<sup>45</sup>, then this valuation methodology is sufficiently flexible as to allow for the Court to decide on a 100% evidentiary discount factor to be applied to the claimed amount; a finding which would result in no compensation being awarded.
87. The DRC includes a query regarding why my report does not address what it states were claims in respect of damage to religious properties<sup>46</sup>, whereas my report addressed each of the claims as set out in the DRC Memorial Chapter 7. Indeed, some descriptive references to instances of alleged damage to religious properties were made in Chapter 4 of the DRC Memorial, as referred to in the DRC Observations<sup>47</sup>, but without explanation those matters were not carried forward and detailed in the DRC Memorial chapter<sup>48</sup> which set out the DRC claim amounts in whatever level of detail was available. Accordingly, I have dealt with those claims that have been detailed by the DRC in their Memorial and any deficiency, if any, lies in the presentation of the DRC claim.
88. In respect of the DRC's claim in respect of Ituri property losses, Uganda makes flawed observations about my report's analysis and recommendations.
89. Uganda inaccurately states that my report "*ignored ... contradictory materials*"<sup>49</sup>, whereas it appears that Uganda has not carried out an examination of the evidence in the file. Although Uganda's Observations do not make their own analysis clear, if I understand their assertion correctly, it appears that Uganda has made an unstated and erroneous assumption that each instance of a mention of "habitation" in the detailed list of assets claimed, would represent a single dwelling or house<sup>50</sup>. This assumption is shown to be unreliable by a review of the evidence supplied by the DRC, since in multiple instances one asset owner<sup>51</sup> lists more than one habitation.
90. Uganda also that the DRC evidence in "*Annex 1.3 of the DRC Memorial, which contains only the summary table shown below:*" (table not shown)<sup>52</sup>. This is not accurate as Annex 1.3 of the DRC Memorial contains multiple lists and files detailing claimed losses across four types of loss (including loss of assets), and also, specifically in respect of assets, these detailed Annex 1.3 lists cover five localities<sup>53</sup>. The 11-page summary list<sup>54</sup> from which Uganda attaches one page in is

---

<sup>45</sup> That is, the Court finds the claim narrative in conjunction with its supporting evidence provided to be utterly deficient, defective, unconvincing or similarly unsatisfactory.

<sup>46</sup> DRC Observations dated 15 February 2021, para. 78.

<sup>47</sup> DRC Observations dated 15 February 2021, footnote 93.

<sup>48</sup> Chapter 7.

<sup>49</sup> Uganda Observations dated 15 February 2021, para. 119 and paras.111-126 generally.

<sup>50</sup> Uganda Observations dated 15 February 2021, para. 118 and footnote 170.

<sup>51</sup> Or "*victime*" as in the original language.

<sup>52</sup> Uganda Observations dated 15 February 2021, para. 116.

<sup>53</sup> Beni, Butembo, Gemena, Ituri and Kisangani.

<sup>54</sup> "Liste Biens Perdus et leurs frequences ITURI.pdf" in Annex 1.3

Observations<sup>55</sup>, is supported by a separate 194-page detailed software generated file<sup>56</sup> that lists assets claimed to have been lost by 1,313 separate Ituri-based asset owners.

91. Uganda makes reasonable points in respect of the lack of evidence presented by the DRC in respect of the claimed unit reconstruction costs. Uganda is correct that, due to the overwhelming majority of dwellings for which a claim has been made adopt a unit rebuilding cost of USD 300, it is reasonable for me to recommend this award amount – even though documentary evidence has not been made available.
92. In sum, taking into account evidentiary issues on claimed reconstruction costs and the reclassification of the category of dwellings, in my view the recommended amount of compensation of USD 5,270,200<sup>57</sup> (which represents 40% of the claimed amount of USD 12,956,200) is reasonable for the Court to consider in its deliberations.
93. In respect of property claims in Kisangani, Beni, Butembo and Gemena, the Ugandan Observations makes a fair point and this warrants a correction of my calculations.
94. Uganda correctly identifies a clerical error on my part, by not reflecting the updated DRC claim amounts from the DRC’s written response to the Court’s question no. 14.
95. Since I have previously dealt with my recommended methodology of making evidentiary adjustments where evidence is less than complete, I can set out below the revised recommended amounts which have been calculated by adjusting the updated DRC claim figures by using the same evidentiary discount factors as in my previous report. The resulting recommended amounts are shown in the table below:

	<b>Updated claim amounts<sup>58</sup></b>	<b>Updated recommended amounts</b>
Kisangani <sup>59 60</sup>	USD 15,197,287	USD 9,118,372
Beni <sup>61 62</sup>	USD 5,022,087	USD 3,766,565
Butembo <sup>63 64</sup>	USD 2,616,444	USD 1,962,333
Gemena <sup>65</sup>	USD 97,550 <sup>66</sup>	USD 64,785
	<b>USD 22,933,368</b>	<b>USD 14,912,055</b>

96. It follows that the table below also requires updating to reflect these changes:

<sup>55</sup> Uganda Observations dated 15 February 2021, para. 116.

<sup>56</sup> “Victimes\_PerteBien\_ITURI.pdf” in annex 1.3

<sup>57</sup> Experts’ Report dated 20 December 2020, para. 152.

<sup>58</sup> DRC Responses to Court’s questions, para. 13.3

<sup>59</sup> Recommended amount is: USD 15,197,287 (claimed) x 60%

<sup>60</sup> Updated (reduced) claim amount is in the DRC Annex 1.10D

<sup>61</sup> Recommended amount is: USD 5,022,087 (claimed) x 75%

<sup>62</sup> Updated (reduced) claim amount is in the DRC Annex 1.6D

<sup>63</sup> Recommended amount is: USD 2,616,444 (claimed) x 75%

<sup>64</sup> Updated (reduced) claim amount is in DRC Annex 1.7D

<sup>65</sup> Recommended amount is: USD 86,380 (evidenced and unchanged) x 75%

<sup>66</sup> The claim amount for Gemena was unchanged.

### Summary of recommended amounts - property damage

97. In summary, each category's recommended amounts are shown alongside the claimed amounts in the table below:

	<b>Updated claimed amount</b>	<b>Updated recommended amount</b>
Property in four named locations <sup>67</sup>	USD 22,933,368	USD 14,912,055
Property of la Société Nationale d'Electricité	USD 97,412,090	USD 56,974,865
Property of Congolese armed forces	USD 69,417,192	USD 41,650,315
	<b>USD 189,762,650</b>	<b>USD 113,537,235</b>

98. In conclusion, in respect of this component of the DRC claim, the claimed amount has been reduced by USD 2,694,707<sup>68</sup> and this results in the recommended compensation amount being reduced by USD 1,720,721<sup>69</sup>.

99. All other recommended amounts remain unchanged.

---

<sup>67</sup> Updated as shown above.

<sup>68</sup> Being USD 192,457,357 – USD 189,762,650 = USD 2,694,707.

<sup>69</sup> Being USD 115,257,956 – USD 113,537,235 = USD 1,720,721.

## Appendix 3.1: Signature of Expert

### Signature of expert

This report has been prepared in accordance with the terms of reference set out by the International Court of Justice by Geoffrey Senogles on 1 March 2021:

A handwritten signature in black ink, appearing to read "Geoffrey Senogles". The signature is written in a cursive style with a long, sweeping underline.

Signed: \_\_\_\_\_



**Report 4**  
**Response regarding Exploitation of Natural Resources**

Dr. Michael Nest

(Montréal, 1<sup>st</sup> March 2021)



## Table of Contents

A. Introduction	32
B. Response to The DRC's <i>Observations</i>	34
C. Response to Uganda's <i>Observations</i>	39
D. Revision to Estimated Quantity of Gold Production	45
Appendix 4.1: Terms of Reference	51
Appendix 4.2: List of References	52
Appendix 4.3: Revised Tables for Gold	54
Appendix 4.4: Signature of Expert	58

## List of Figures and Tables

Figures		Page
4.B1	Log and board prices as a percentage of 1996 prices	39
4.C1	Stages of coltan value chain: percentage of international market price	43
4.C2	Price observations from DRC as a percentage of Nest Report's base price	44
<b>Tables</b>		
4.B1	Ituri: two categories of value extracted, 1998-2003	35
4.D1.1	Uganda's <i>Counter-Memorial</i> : gold exports (kgs): Tables 8.1 and 8.2 (full year)	47
4.D1.2	Uganda's <i>Counter-Memorial</i> : gold exports (kgs): Tables 8.1 and 8.2 (1998 and 2003 at five months only)	47
<b>Tables from Nest Report with revised gold data</b>		
D4.1	Est. of quantity of resources produced, 1998-2003 ( <i>revised</i> )	47
D4.2	Annual average resource prices, by year ( <i>not revised</i> )	48
D4.3	Resource prod. in 2020 USD <u>before</u> value exploited ( <i>revised</i> )	48
D4.4	Est. value exploited by personnel: UAI, Ituri & non-Ituri ( <i>revised from Corrigenda</i> )	48
D4.5	Est. of proxy taxes on theft and fees & licences, and tax on profits as <u>percentages</u> ( <i>not revised</i> )	49
D4.6	Est. proxy tax rate for theft ( <i>not revised</i> )	49
D4.7	Est. proxy tax rate for value of fees and licences ( <i>not revised</i> )	49
D4.8	Tax range and adopted tax on value ( <i>not revised</i> )	49
D4.9	Value of exploitation disaggregated by method, Ituri and non-Ituri, 2020 USD ( <i>revised</i> )	50

## A. INTRODUCTION

100. This report addresses comments raised by the *Observations of the Democratic Republic of the Congo on the Experts' Report of 19 December 2020* ("The DRC's Observations") and Uganda's *Observations on the Experts Report dated 19 December 2020* ("Uganda's Observations"), with respect to *Report 4: Exploitation of Natural Resources* by Dr. Michael Nest ("the Nest Report") in *The Experts Report on Reparations for The International Court of Justice. Case Concerning Armed Activities on the Territory of the Congo, The Democratic Republic of the Congo v. Uganda*, dated 19 December 2020.
101. Comments raised by the Democratic Republic of the Congo (DRC) are addressed in Part B and comments raised by Uganda are address in Part C.
102. However, the DRC and Uganda both raised a similar concern relevant to the Court's terms of reference (TOR) for the *Nest Report*. This concern is addressed immediately below.
103. Each Party's *Observations* has a different interpretation of what data should inform the dollar amount of reparations considered the result of "illegal exploitation":
- 103.1 The DRC suggests in its *Counter-Memorial* (DRC 2018) and repeats in its *Observations* that reparations should be the value of the *total quantum* of production, and makes an estimate of the total value of "injuries caused to its natural wealth by Uganda" within an area approximating what the Nest Report terms the Ugandan Area of Influence (UAI) (DRC 2018: §5.190). These amounts are \$657.5m for gold, \$7.1 for diamonds, \$2.9m for coltan, \$2.7b for fauna, and \$100.0m for deforestation.
- 103.2 Uganda's *Observations* suggests reparations should be a *subset of value* of the total quantum of production, and proposes two possible methods to estimate this subset: that "...the loss to the State would be the value of DRC's loss less the costs incurred in extracting and transporting (and possibly refining) those minerals for sale. [OR] If a private party owned the mine, the DRC's loss would be limited to foregone tax income, royalties or other fees payable to the State" (§184).
- 103.3 In keeping with the TOR, the *Nest Report* estimates both amounts and makes them available to the Court: (1) the value of the total quantum of production (as suggested by the DRC); and (2) a subset of value illegally exploited by persons not authorised to do so (as suggested by Uganda). As is discussed in more detail in Part C, in identifying a subset of value of "loss" the Nest Report uses an approach similar to that suggested by Uganda (an estimation based on taxes and fees).
- 103.4 Whether the Court decides that the value that was "illegally exploited" should be (1) or (2), or some other amount, is a matter for the Court.

## B. THE DRC'S OBSERVATIONS

104. This section contains responses to *The DRC's Observations* organized under the report's own headings.

### SECTION: "The non-inclusion of fauna and deforestation" (§44-§49)

105. The DRC's *Observations* notes that the DRC's *Counter-Memorial* (2018) makes a reparation claim of "almost US\$2.7 billion" (§46) relating to fauna and deforestation, and that the Nest Report "...contains no explanation as to why the expert has not included wildlife or forest resources (with the exception of timber) in his analysis" (§47).

105.1 My task was to present in writing my responses to the questions corresponding to my *area of expertise*. In my communications with the Court I have presented myself as being an expert in conflict minerals.

105.2 While timber and coffee - both included in my analysis - are non-mineral commodities and therefore ostensibly beyond the expertise of someone specialised in "conflict minerals", the process for quantifying production and identifying prices for non-mineral commodities is similar to that for mineral commodities. For both types of commodities, there are established international markets and open-source datasets and other references about production, exports, imports and prices.

105.3 By contrast, the skills and knowledge required to assess the economic value of wildlife or the cost of deforestation are quite different<sup>70</sup>. For example, an assessment of the economic value of fauna or damage from deforestation could hypothetically require: knowledge of baseline species population surveys; methods for estimating direct and indirect animal deaths; valuation of ecosystems and ecological services rendered by people within these ecosystems; or consideration of value that should accrue to the State from illegal wildlife products such as ivory (specifically mentioned in *The DRC's Observations* in §46 and §48). I do not possess these skills and knowledge, nor have I led the Court to believe I do.

105.4 In keeping with my declarations to the Court regarding my subject area of competence, I am not capable of forming an opinion on the value of fauna or deforestation (beyond the commercial timber trade), and I have no opinion on these topics.

### SECTION: "The acts attributable to Uganda: the expert's failure to take account of the unlawful exploitation of natural resources by civilians in Ituri" (§50-§56)

106. The DRC's *Observations* states that the TOR relating to quantification and valuation of natural resources should "... cover not only the plundering and exploitation of natural resources by Ugandan agents and other allied armed forces of Uganda, but also unlawful *exploitation by civilians*, brought about by Uganda's violation of its international obligations as an occupying Power in Ituri" [emphasis added] (§51). Thus, there are two comments: civilians were excluded from the analysis and any value extracted by them should be defined as "illegal exploitation".

---

<sup>70</sup> The *Nest Report* interpreted "deforestation" as a different activity to "timber production". The former was interpreted as destruction of forest irrespective of purpose; the latter was interpreted as the harvesting of trees in order to produce commercially tradable timber.

- 106.1 The *Nest Report* (§115) does not explicitly include value extracted by civilians. Furthermore, estimating value of resources retained by civilians is straightforward: it is whatever is left after military and administrative personnel extracted what they did. Table 4.B1 shows these two categories of value for each resource (Table 4.B1 is based on Tables D4.3 and D4.4 in this report).

**Table 4.B1: Ituri: Two categories of value extracted, 1998-2003**

	A		B		C
	Military/Administrative Personnel 2020 USD	% share of C	Civilian-Retained Value 2020 USD	% share of C	Total 2020 USD
<b>Gold</b>	35,359,097	36.4	61,914,898	63.7	97,273,995
<b>Diamonds</b>	1,013,897	28.8	2,512,701	71.3	3,526,598
<b>Coltan</b>	63,038	28.8	156,225	71.3	219,263
<b>Tin</b>	43,258	28.8	107,204	71.3	150,462
<b>Tungsten</b>	13,791	28.8	34,178	71.3	47,969
<b>Timber</b>	2,793,301	10.8	23,022,794	89.2	25,816,095
<b>Coffee</b>	2,046,568	9.9	18,604,977	90.1	20,651,545
<b>Total*</b>	<b>\$ 41,332,950</b>	<b>28.0</b>	<b>\$ 106,352,977</b>	<b>72.0</b>	<b>\$ 147,685,927</b>

\* Rounding may cause totals in this table, and between this table and the revised Excel calculations spreadsheet, to differ by  $\leq$  one dollar.

- 106.2 The DRC is correct that the *Nest Report* interpreted the estimated value extracted by military and administrative personnel only as “unlawful exploitation”, and that it did not define value retained by civilians in this same category. The reason the latter was excluded was based on an assumption that civilians were voluntarily involved in the production, trade and export of the seven resources from 1998 to 2003, and that profits retained by them, after theft and taxes, remained in their control.
- 106.3 Whether the civilian-retained portion of value identified in Col. B should also be defined as “illegally exploitation” and therefore part of “damage suffered”, is a matter for the Court and is made available here for the Court’s consideration.

**SECTION: “The estimation of stolen resources based on a ‘proxy tax’” (§58-§61)**

107. The DRC’s *Observations* expresses “...doubts about the appropriateness of using a “proxy tax rate” to calculate the damage in question. More specifically, it wonders why the expert has used this proxy tax rate to assess the resources concerned, rather than basing his calculations on Ugandan exports that cannot be explained by national production, as the DRC did in its Memorial, in line with the United Nations Panel of Experts (§58)’.
- 107.1 This issue appears to be a definitional one relating to the term “theft”. It is correct that the *Nest Report* describes “theft” as one of three methods used to extract value from resources (§116) and not the total quantum of a resource estimated to have entered Uganda. However, the *Nest Report* makes different estimates of value available to the Court to assist it in making a determination regarding what constitutes “theft”.

**SECTION: “The way in which Ugandan exports are taken into account” (§62-§63)**

108. The concern in this section is not entirely clear. The DRC’s *Observations* appears to request clarification about why the *Nest Report* did not strictly limit estimates of resources originating in the UAI to the equation:

*‘Ugandan Exports minus Ugandan Production equals Resources Originally from the UAI’*

- 108.1 If this understanding is correct, the response is that it is possible Uganda imported and then re-exported some commodities from countries other than the DRC. Such re-exports would be included in Uganda's export data even though the commodities would not have originated in the UAI, nor would they have been produced in Uganda.
- 108.2 Ugandan export data also contain gaps for some resources, such as diamonds, casting doubt on their overall reliability.
- 108.3 For other resources there are puzzling absences in production data, or production data exist but export data do not exist for the same year, or production data are less than production. All such cases cast doubt on the reliability of data for Uganda. (Minerals such as tantalite, cassiterite and wolframite cannot be used until they have been smelted into metal, so it is unlikely they were consumed domestically).
- 108.4 It was therefore necessary to estimate the UAI's likely production of resources, independently of Ugandan data, and then assess the quality of both sets before making estimates of production.

**SECTION: "The fixing of the price of resources" (§65-§71)**

- 109. The DRC's *Observations* states two reservations about the Nest Report's pricing of resources: "first, the significant discounting of prices (by 35 per cent) as compared with the market rate and, second, the relevant period (1998-2003)" (§66).
  - 109.1 In regard to the discount of 35% to obtain the adopted price - an issue which is responded to in further detail in Part C of this report - the DRC queried why the same discount was applied across all resources (§67). It is likely that an adopted (discounted) price that reasonably represents domestic value added within the UAI varies from one resource to another. However, there is uncertainty around the degree of variation. The Nest Report adopted a more cautious approach - and also one that was methodologically simpler - of a single, conservative, discount rate, to improve confidence that any estimate of value was, at a minimum, reasonable.
  - 109.2 The DRC's *Observations* continues on to note that "...if the price considered relevant in the UAI is deemed to be lower than the base price, this is the consequence of Uganda's unlawful armed activities in Congolese territory. From a legal perspective, this reduction cannot be applied in respect of the DRC. The relevant price is that which would have been applied had Uganda not violated its international obligations" (§67).
  - 109.3 It is my opinion that lower resource value within the UAI is not primarily a "consequence of Uganda's unlawful armed activities". The domestic value of a resource at the producer, small trader or large trader level, for any commodity where the state does not control production, exchange and prices, is always less than the international market price; if not, there would be no export market.
- 110. The DRC's *Observations* objects to the *Nest Report's* method of using a yearly average for each year from 1998 to 2003, stating "...this approach is legally problematic. It does not take account of the market conditions in the UAI, caused by Uganda's breach of international law" (§71). It adds that during the period in question the price of gold was historically low. The DRC proposes that a single average price for each resource for the entire 1998-2003 period should have been adopted.

- 110.1 The “price” referred to in The DRC’s *Observations* is the international market price. While it is correct that the gold price was historically low during the relevant period, market conditions in the UAI did not *cause* the international market price to be historically low.
- 110.2 The DRC also states that from 1998 to 2003 “Congolese gold resources were obviously exploited and sold as a matter of urgency, with no regard for market conditions. Had they been exploited and sold legally, on the other hand, operations could have been delayed until the market had recovered” (DRC 2018: §5.57). As most artisanal producers and small traders are poor, their incentive when they have a commodity is typically to sell it as soon as possible because of a need for cash, rather than delay sale (see Johnson & Tegera 2005; Garrett 2008). It is speculative to suggest that conflicted conditions caused Congolese producers and traders to sell gold any more quickly between 1998 and 2003 than they otherwise would, and were therefore unable to take advantage of post-2003 higher prices. It is also always difficult to predict whether international gold prices will move up or down, so a producer or trader in 2000, for example, would have no way of knowing the direction of prices after 2003.

**SECTION: “The assessment of the quantities of gold and timber” (§72-§74)**

111. The DRC’s *Observations* raises concerns about the estimated quantities of gold and timber in the *Nest Report*.
112. In regard to gold, the DRC’s *Observations* at §73 raises two concerns about the source of data used in Line 4 of Table A4.5.1.3 of the *Nest Report* regarding gold exports from Uganda for 1998, 1999 and 2000. The concerns are: (1) why ComTrade data were not used when these were “used for other resources”; and (2) why “the statistics produced by the Ugandan Government itself, to which the DRC has itself referred in its Memorial” were not used in Line 4. (The data to which the DRC refers are from the Uganda Ministry for Energy and Mineral Development).
- 112.1 In regard to (1), ComTrade data were not used for two reasons. First, there are significant inconsistencies between these data and data from both the Ugandan Ministry of Energy and Mineral Development and the Ugandan Bureau of Statistics. Second, there is an absence in ComTrade of any export or import data involving the United Arab Emirates or India, even though both countries are known destinations for gold originating in Uganda (Mthembu-Salter 2015: 7, 12; HRW 2005: 109). These two factors make it likely that ComTrade data are incomplete and therefore not reliable.
- 112.2 In regard to (2), data in Line 4 are, indeed, based on “statistics produced by the Ugandan Government itself”. That is, Uganda’s Bureau of Statistics as reported in Uganda’s *Counter-Memorial* and as is stated in the *Nest Report’s* note (c) for Line 4 of Table A4.5.1.3.
- 112.3 The *Nest Report* used gold export data from Uganda’s Bureau of Statistics rather than the Ministry for Energy and Mineral Development (MEMD) because in its *Counter-Memorial* (§8.63-§8.66), Uganda states that the 1998-2000 data reported in UNPE (2002a) are, in fact, quantities for which export permission was granted *on paper* but not the *actual* quantities that left the country. Uganda clarified that its Bureau of Statistics publishes data on quantities actually exported and that it is the

most reliable source of data, not the Ministry for Energy and Mineral Development. This clarification was accepted and incorporated into the *Nest Report's* methods.

113. In regard to estimation of quantities of timber, The DRC's *Observations* at §74 notes the *Nest Report* (§245-§246) states informal sawn wood exports from the DRC to Uganda, Kenya and Rwanda were 70,000,000 kgs per year for 2010-2011 (from Umunay 2011) and, based on this figure, an estimated 20% (8,400,000 kgs per year) came from the UAI during from 1998 to 2003. It comments that this paragraph does not explain the method of estimating "informal production in the UAI at 20 per cent of the total for the DRC".

113.1 The estimation method used relied on two key factors: the proportion of informal timber that probably went to Uganda (rather than Kenya or Rwanda); and conditions in the DRC between 1998 and 2003 that influenced the production and export of timber. The method is explained in the *Nest Report* (pp.127-128) and is clarified here:

113.1.1 Umunay's (2001) estimate of 70,000,000 kgs in informal exports was the combined total for Uganda, Kenya and Rwanda. As these data are not broken down by country, it is impossible to state with total certainty what percentage of DRC informal timber went to each country. Nevertheless, based on a deductive reasoning process using the factors drawn from Baker et al (2003), it was estimated that Uganda's share was around 60% (42,000,000 kgs):

113.1.2 Population size: in 2001, the three countries' combined population was 63 million, of which 49% were in Kenya, 38% in Uganda, and 14% in Rwanda (World Bank 2003: 14-16).

113.1.3 Profitable markets: Kampala is a large, relatively wealthy, city;

113.1.4 Proximity to the DRC (which reduces transport overheads): Uganda and Rwanda are immediately adjacent; Kenya is more distant.

113.1.5 The availability of domestic sources of timber: limited in Rwanda; more abundant in Uganda; less so in Kenya;

113.1.6 Attractive prices for DRC timber compared to local sources (DRC timber was cheap); and

113.1.7 Reports of the continuation of logging, albeit at a highly constrained rate, in Ituri, North Kivu and South Kivu immediately adjacent to Uganda and Rwanda.

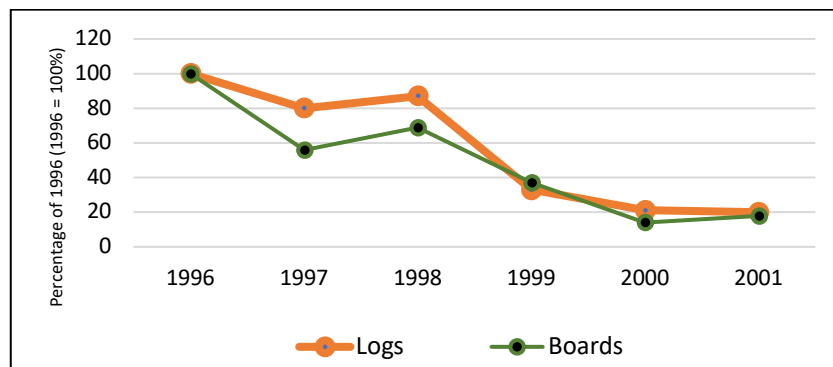
113.1.8 In sum, the Ugandan market is large, immediately adjacent (Ituri was a known source of informal timber exports), DRC timber is cheaper than local sources, and there was some preference for DRC mahogany over other timber in Uganda. Kenyan markets are also large, but transactions costs are higher (further away; an additional border to cross), with no preference for DRC timber. Rwanda was a significant historic destination, but its population is much smaller (about one-third of Uganda's) suggesting lower demand, it has local plantations, and there was no widespread preferential demand for DRC timber. Based on these observations, a confident reasonable estimate of Uganda's share of DRC informal timber exports is 60% (42,000,000 kgs)

113.2 However, Umunay’s data are from 2010-2011 and informal timber production and exports are likely to have been much lower between 1998 to 2003 due to conflicted conditions. Rates of informal timber production during this period were estimated to be 80% lower than of 2010-2011, i.e., 20%. 20% of 42,000,000 kgs is 8,400,000 kgs. This estimate was based on the following factors:

113.2.1 Low rates of timber production in the area corresponding to the UAI are noted by Baker et al (2003), the most comprehensive review of DRC timber production during the relevant period. She notes that logging activity in Orientale Province “has virtually come to a halt. The exception is the Ituri forest in eastern Orientale, from where timber can be transported by road to Uganda. The montane and lowland forests of the Kivu provinces still contain valuable trees. Rebels control these areas and current cutting intensities are low due to access and security issues” (p.51).

113.2.2 Baker et al (2003) provides data for both logs and boards that illustrate the general decline in DRC timber exports - a trend that was likely to have shaped informal timber exports as well. These data are shown in Fig. 4.B1:

**Fig. 4.B1: Log and board prices as a percentage of 1996 prices (1996 = 100%)<sup>71</sup>**



Source: Baker et al (2003), Table A-2.2, p.65.

113.2.3 Data for 2002 and 2003 are not available, but Baker et al (2003) comments that timber exports into Rwanda from the DRC fell “dramatically” in late 2002. She also notes that military and other officials tried to “distance themselves” from DRC timber after the release of the UNPE 2002 report (p.67). Given ongoing armed violence by non-state armed groups in the UAI during this period, and coupled with observations provided by Baker et al, it is reasonable to assume that timber exports did not increase from 2000-2001 levels during 2002 and 2003.

113.2.4 In sum, a reasonable confident estimate of informal timber exports during the 1998 to 2003 period - given conflicted conditions, demand, and transport constraints - is that it was about 20% of pre-war levels.

<sup>71</sup> Baker’s data stop at 2001; data for 1996 are included as a pre-regime change baseline (from President Mobutu to President Kabila).



## C. UGANDA'S OBSERVATIONS

This section contains responses to Uganda's *Observations*.

### SECTION: "Parts of the Nest Report are *Ultra Petita*" (§170-§172)

114. Uganda's *Observations* states that "The Nest Report estimated the quantity and value of tin (cassiterite), tungsten (wolframite) and coffee. Those estimates should, however, be disregarded because they are ultra petita" (§170).

114.1 The *Nest Report* (see §200) explains the reasons for including the three additional resources. Whether the Court limits damages to the four resources suggested in the TOR (gold, diamonds, coltan and timber) is a matter for the Court.

### SECTION: "The Estimates Recommended in the Nest Report Are Unfounded and Arbitrary" (§173-§177)

115. Uganda's *Observations* states that the *Nest Report* uses a "...highly subjective methodology that bears no connection to the standard methods for proving the existence and valuation of damages. Indeed, Mr Nest's methodology departs so far from standard practices that he arrives at arbitrary number" (§174).

116. Uganda's *Observations* claims that "relevant international practice *requires* that the existence and valuation of damages resulting from the illegal exploitation of natural resources be proved by specific evidence as to the (1) time, (2) place, (3) amount of resources extracted, and (4) the valuation thereof (fn250)" [emphasis added] (§174).

117. Support for Uganda's claim at §174 is given in footnote 250, which refers to Uganda's *Counter-Memorial - see Section I: The DRC's Claims Are Not Based on Standard Methods for Proving the Existence and Valuation of the Damages It Claims* (§8.4 to 8.15). Section I states "A survey of relevant practice relating to pillage, plunder or spoliation (fn 1042) indicates that the method for proving compensation for the exploitation of natural resources entails several elements..." (§8.5) and goes on to list (1) place, (2) time, (2) determination of at least approximate amount, and (2) valuation of those resources as these "elements". Footnote 1042 is provided in support of the claim regarding "relevant practice" connected to these four elements.

Footnote 1042 states:

Methodology and evidentiary standards for proving pillage, plunder, and spoliation may be found in a range of jurisprudence before international criminal tribunals and mixed claims commissions from Nuremberg to the present, including situations where natural resources have been seized. See, e.g., Polish Forestry, Case No. 7150, The United Nations War Crimes Commission, History of the United Nations War Crimes Commission and the Development of the Laws of War (1948), p. 485 (finding liability of German troops for over-exploitation of forests in occupied Poland). See generally Michael A. Lundberg, "The Plunder of Natural Resources during War: A War Crime?", *Georgetown Journal of International Law*, Vol. 39 (2007-2008); Daniëlla Dam-de Jong, *International Law and Governance of Natural Resources in Conflict and Post-Conflict Situations* (2015); F. Ortino & N. M. Tabari, "International Dispute Settlement: The Settlement of Disputes Concerning Natural Resources — Applicable Law and Standards of Review," in RESEARCH HANDBOOK ON

118. In fact, none of the four references specified in fn 1042 of Uganda's *Counter-Memorial* provide information about agreed practice or best practice regarding "methodology and evidentiary standards".
- 118.1 In regard to the Polish Forestry case, the United Nations War Crimes Commission document (UNWCC, 1948: 496) at the place indicated has no mention of place, time or approximate quantity, nor any discussion of *methods of estimating* quantity and value of natural resources illegally exploited during conflict. It simply states that the ten Germans who had been appointed to "heads of various Departments in the Forestry Administration in Poland during the German occupation (1939-1944) ... caused the wholesale cutting of Polish timber to an extent far in excess of what was necessary to preserve the timber resources of the country" and gives a total estimate of "6,525,000,000 zloty" as the value of the timber illegally exploited.
- 118.2 Lundberg (2008) discusses under what laws pillaging of natural resources should be prosecuted and different legal definitions of "pillage" and "plunder", but he has no discussion regarding the best methods to estimate quantity and value.
- 118.3 Dam-de Jong (2015) analyses methods to prevent the production and trade of conflict minerals, but she does not discuss the best methods to define quantity and value.
- 118.4 Ortino and Tabari's chapter (2016) discusses under what laws *international investment* disputes relating to natural resources should be settled and standards of review for such matters, neither of which is relevant to this case. There is no discussion of best methods to define quantity and value.
119. However, methods similar to those of the *Nest Report* have been used in other cases:
- 119.1 The Liberian *Truth and Reconciliation Commission* details illegal production and export of timber from 1999 to 2003 during the conflict in that country, using export data on quantity and value of the port of Buchanan (2009: §29–33). Specific evidence regarding the time and place of timber cutting are not given. Furthermore, although timber concession locations were known, estimates of production are not based on concession-level data. The *Nest Report* uses a method of estimation similar to that used by Liberia's Truth and Reconciliation Commission, except that the former largely bases its estimates of quantity and value from *import* partners, not export data as used by Liberia.
- 119.2 The U.S. Military Tribunal at Nuremberg accepted approximate estimates. The Tribunal found Paul Pleiger, the manager of Mining and Steel Works East Inc. guilty of pillaging coal from Polish mines and quantified the amount using estimates from the manager of the Polish coal mines, Hans Werner von Dewall (Nuernberg Military Tribunal, 1949: 741). Von Dewall gave detailed estimates for different mines (presumably based on mine records), but he also estimates "...that of these amounts *two-thirds* went to Germany" [emphasis added]. That is, von Dewall made an approximate estimate - "two-thirds" - of the quantity of a resource (coal) illegally taken from one country into another based on his knowledge about coal production, but not based on the timing or quantities of specific exports.

119.3 It is noted that the TOR for the *Nest Report* also requests an “approximate quantity” of natural resources (see Appendix 4.1: Terms of Reference, Parts (a) and (c)).

**SECTION: “Quantity of Resources Produced and Their Geographic Distribution” (§178-§181)**

120. Uganda’s *Observations* states that the *Nest Report* relied on the ‘Exports *minus* Domestic Production’ model, which “...plainly contradicts the Court’s express finding in the 2005 Judgment that there was no governmental policy of Uganda directed at the exploitation of natural resources of the DRC or that Uganda’s military intervention was carried out in order to obtain access to Congolese resources” (§179).

120.1 As explained earlier in the response to The DRC’s *Observations* under the section titled “The way in which Ugandan exports are taken into account”, the *Nest Report* does not strictly rely on this model. Nevertheless, the application - or lack of strict application - of this model has no connection to Uganda having, or not having, a government policy directed at either exploitation of natural resources or that military intervention was carried out for this purpose. The *Nest Report* makes no such suggestion.

121. Uganda’s *Observations* continues on to state that “Mr Nest makes arbitrary assumptions to estimate the proportions of resources within the UAI and Ituri” and “...assumes, for example, that ‘around 45% of gold production in UAI probably came from Ituri, and around 55% from non-Ituri’ [fn265: §254]’ But he offers no explanation for this assumption and how he extrapolates these percentages from the sources he cites. The same defect underlies his assumptions with respect to other resources” (§180).

121.1 This quote regarding assumptions about gold is immediately preceded by two paragraphs in the *Nest Report* (§252-§253) that reference eight documents containing eye-witness reports of gold mines in specific locations and statements by gold producers and traders about the origins of their gold. Based on these documents, an *approximate estimate* was made of proportions originating in Ituri v. non-Ituri.

121.2 The other paragraphs in the *Nest Report* noted by Uganda’s *Observations* fn 266 - §257 (for diamonds), §260 (coltan), §262 (tin), §264 (tungsten), §267 (timber), and §270 (coffee) - are also immediately preceded by explanatory paragraphs.

121.3 In regard to diamonds, coltan, tin and tungsten, there was most likely zero production in Ituri<sup>72</sup>. Describing production in Ituri as ‘zero’ is not “arbitrary”. Furthermore, it follows logically that if a resource was produced in the UAI and zero originated in Ituri, then it came from *outside* Ituri. Again, this is not arbitrary.

**SECTION: “Annual Average Prices of Resources” (§182-§187)**

122. Uganda’s *Observations* raises objections to the *Nest Report*’s method of calculating prices, stating “The measure of any loss to the DRC from the illegal exploitation of mineral

---

<sup>72</sup> Five per cent of UAI’s share of these resources was allocated to Ituri for each of these resources because of reported transit trade (not because of production).

resources is not the commercial value of the minerals on the open market, as Mr Nest erroneously assumes” (§184).

122.1 The *Nest Report* does not assume this. The TOR required an estimation of total quantity of production within the UAI and then a valuation of this quantity. The ‘discounted’ adopted price - 65% of the international market price - was explicitly used in order to avoid valuing the quantum of production at “the commercial value of the minerals on the open market”.

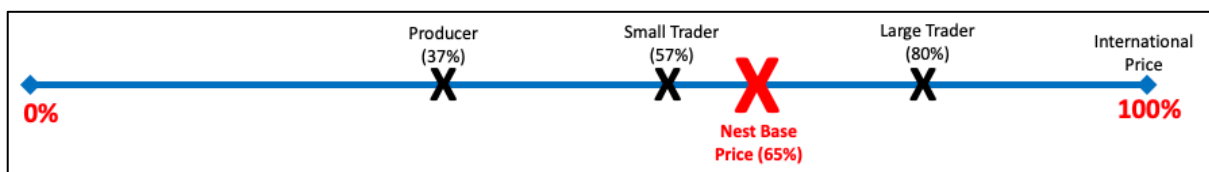
123. Uganda’s *Observations* at §184 objects to this approach, stating that the 35% discount is “entirely arbitrary”. This is incorrect.

123.1 Prices received by producers, small traders and large traders ‘upstream’ in the value chain for any commodity are always less than the final international market price. It is therefore reasonable to reduce the international market price to the probable average price within the DRC’s domestic value chain for each resource. The relevant question is What is a reasonable discount?

123.2 The total value of a resource grows - ‘snowballs’ - the further it travels from the point of production towards the point of export, because at each point of exchange someone adds their profit margin (taking into account their costs). This means that obtaining a single adopted price (as a percentage of the international price) that represents value for the resource along the entire chain should be near the *median* point of all value (where accumulated value lies equally on either side). A discounted price too close to the international price will over-estimate value; a discounted price too close to producers will under-estimate value.

123.3 In his study of coltan production and trade in eastern DRC in late 2000, Martineau (2003) compiled data on prices when the international market price was \$119 per kg<sup>73</sup>. The study focused on the percentage of profit (as a percentage of the international market price) accruing to different stages of the value chain which they divided into producers, small traders, large traders, and wholesalers (who received the international market price). These percentages are shown in Fig. 4.C1 along with the *Nest Report’s* adopted (discounted) price of 65% of the international market price.

**Fig. 4.C1: Stages of coltan value chain: percentage of international market price**



Source: Martineau (2003), *La route commerciale du coltan: une enquête*, Table 7.

123.4 When transposed onto Martineau’s (2003) coltan price points within the DRC value chain as shown in Fig. 4.C1, the *Nest Report’s* adopted price of 65% of the international price minus a discount of 35%, is shown to be a reasonable

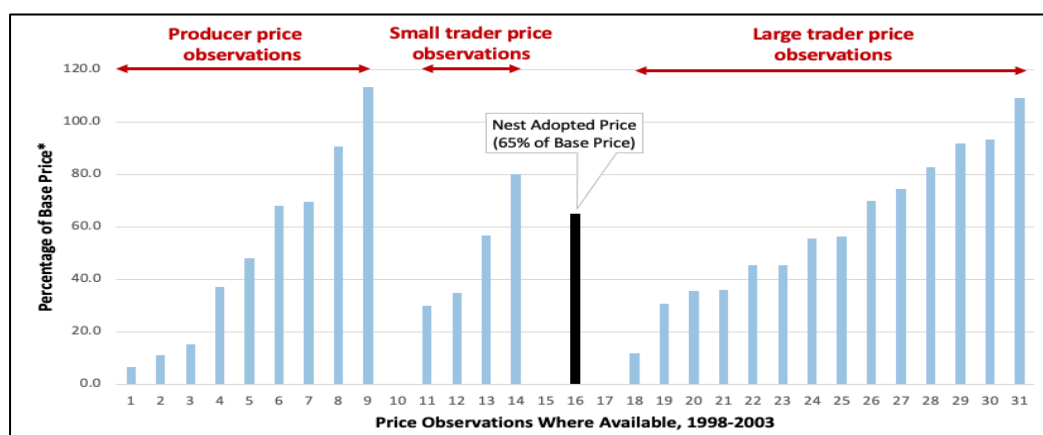
<sup>73</sup> Fig. 4.C1 attributes to producers, small traders and large traders an equal share of domestic taxes/fees (which totaled 40% of the international market price of \$119 per kg).

conservative estimate of the median point where total accumulated value of a resource is likely to be equally distributed either side.

- 123.5 The *Nest Report* (see §85-§113) also identifies price observations from sources independently of the key data source used to obtain the base price (the international market price) for each resource. Fig. 4.C2 below has converted these independent observations into a percentage of the base price, then grouped them by producer, small trader or large trader. Most observations are for coltan, coffee and timber.
- 123.6 Note, Fig. 4.C2 is for illustrative purposes; the observations are not comprehensive for each resource across the entire value chain. What it illustrates is how the value of a resource at different points of a value chain *varies* from the international market price, and why an adopted (discounted) price should not be a direct function of either the producer, small trader or large trader price, but needs to represent median value across the entire chain.

**Fig. 4.C2: Price observations<sup>74</sup> from DRC as a percentage of *Nest Report's* base price\***

\* Base Price = International market price = 100%



- 123.7 In sum, rather than being “entirely arbitrary”, estimation of the adopted price was informed by price data collected by researchers and international organisations, as well as knowledge of how value grows as a resource is traded closer and closer to the international market. It remains my opinion that a 35% discount from international market prices across the time period (1998-2003) is a reasonable conservative estimate, as was the process used to arrive at this figure.
124. As noted in the Introduction to this report, Uganda’s *Observations* states that “illegal exploitation” of mineral resources should be defined as “the net loss in value to the [DRC] State from the exploitation of those resources” (§184). Two methods are suggested to calculate “net loss” defined in this manner: one when the state owns the mine, and one when a private party owned the mine.

<sup>74</sup> Sources: obs. 1-3, 5-7, and 9 (coffee): ICO (2020); obs. 4, 13-14 (coltan): Martineau (2003); ob. 8 (coltan): Redmond (2001); ob. 11 (coltan): Tegera, Johnson and Mikolo (2002); ob. 12 (tin) Johnson and Tegera (2005); obs 18 and 20 (timber): UN ComTrade (2020); ob. 19 and 23 (coltan): IPIS (2002); ob. 21 (coltan) UNPE (2002b); ob. 22 (timber): Djiré (2003); obs 24-27, 29 and 31 (timber): Baker (2003); ob. 28 (gold): HRW (2005); ob.30 (diamonds): Johnson and Tegera (2005).

- 124.1 Exploitation of resources by state-owned companies in the UAI had ceased prior to the 1998-2003 period. Exploitation was therefore by private parties only.
- 124.2 Uganda's *Observations* proposes in regard to exploitation by private parties that "the DRC's loss would be limited to foregone tax income, royalties or other fees payable to the State" (§184). This resembles the method used by the *Nest Report* to calculate "illegal exploitation" (see §115-§154) - although the entire quantum of each resource was also valued and made available to the Court for its determination.
- 124.3 The amount valued by the *Nest Report* as "illegal exploitation" estimates the probable range (percentage) of taxes and fees then estimates how much value was extracted using these tax rates. In peacetime these taxes and fees would be paid to the State, but from 1998-2003 they were paid to persons who were not agents of the DRC State. I.e., these amounts constituted foregone State income.
125. Uganda's *Observations* final comment on prices is at §186, which notes the *Nest Report* adjusts the adopted prices to 2020 USD by 'inflating' them using a standard rate (inflatos are listed in the final line of Table 4.2 at §274), but that the inflators "appear to have been selected at random. Mr Nest nowhere explains on what basis he purports to derive these 'inflatos'".
- 125.1 It is correct that Table 4.2 does not note the origin of the inflators. However, note (e) of Table A4.5.1.5 (see *Nest Report*, p.115) states the rates used to get 2020 USD were "...taken from US Inflation Calculator, based on US Government CPI data published on October 13, 2020, which uses US Labor Dept's Bureau of Labor Statistics data: <https://www.usinflationcalculator.com>." This information is subsequently repeated six times in notes (c) of Tables A4.5.2.2 (diamonds), A4.5.3.2 (coltan), A4.5.4.2 (tin), A4.5.5.2 (tungsten), A4.5.6.2 (timber), and A4.5.7.2 (coffee).

**SECTION: "Proxy Taxes for Estimate the Exploitation Value" (§188-§200)**

126. Uganda's *Observations* states in regard to tax rates described in Table 4.5, which is based on Appendix 4 of the *Nest Report*, that "...nearly all of the data have no direct connection to Uganda or UPDF personnel, but rather refer to other States, the DRC and/or Congolese rebels. Taxes and levies collected by third parties cannot serve as a reliable basis on which to extrapolate proxy taxes on Uganda and UPDF personnel" (§192).
- 126.1 The *Nest Report* does not claim that the Ugandan Government formally set or levied taxes. Under the TOR, the task was to identify methods of exploitation and value extracted using those methods within the UAI. In Ituri, *who* or *which organisation* created or levied those taxes was not relevant for the *Nest Report's* estimations. Outside Ituri, *proxy* rates of tax were estimated to identify probable value exploited by some UPDF personnel.
127. Uganda's *Observations* states "...more than ten references in [Table 4.5] refer to dates that fall outside the temporal scope that is limited to August 1998-May 2003" (§193); that "...many references relate to areas outside what Mr Nest calls the 'Ugandan area of influence'" (§194); and that the data come "primarily from a single source - publications by Johnson and Tegera" (§196).
- 127.1 Table 4.5 contains 44 separate references to a tax, levy or payment, from 12 separate source documents. A majority of references (55%) are within the 1998-2003 period.

- 127.2 In regard to Johnson and Tegera (see §196), they have publications from 2005 and 2007<sup>75</sup>. The 2007 publication is the source for 13 out of 44 references. If Johnson and Tegera (2007) were removed, this would leave 31 references of which 61% fall within the 1998-2003 period. However, it is my opinion that just because numerous data come from a single reputable source is not grounds to dismiss that source.
- 127.3 In regard to references being from areas outside the UAI (see §194), tax rates across territory not held by the DRC Government (including the UAI) were determined by RCD-Goma from August 1998 to March 1999. It is only after March 1999 when RCD-Goma split into various factions, that tax rates began to evolve from this baseline in areas under each faction's control. While some change in tax rates from March 1999 is to be expected, differences are unlikely to be too large because this would cause a shift in trade from area to another, depriving military and administrative personnel of opportunities to extract value. As noted by the *Nest Report* (§136.2), UNPE (2001b: §44) states "The high combined taxes imposed by the RCD-Goma rebel group and RPA ultimately resulted in diamonds mined in this area being redirected to Kampala, where lower tax rates prevail". That is, total combined tax (including taxes on fees, licences and value) within the UAI were most likely lower than in the Rwandan Area of Influence.
128. Uganda's *Observations* from §195 to §200 objects to the adopted tax rate of 20% for diamonds (compared to the reference rate of 15% shown in the *Nest Report's* Table 4.5) and of 8% for timber (compared to the reference rate of 6% shown in Table 4.5).
- 128.1 For both diamonds and timber the reference tax rates were for *export taxes* only. Source documents make numerous references to the existence of taxes and levies *in addition to export taxes*. For example, UNPE (2002a) reports "licencing fees" for commercial operators in urban centres (§101) and licences "for trading in agricultural products" (§89); both UNPE (2002a: §108) and Le Billon and Hocquard (2007: 90) report licences and fees for coltan; and the Porter Commission (2002) reports a charge on artisanal gold miners to enter the mine (§109).
- 128.2 The probable value extracted from both diamonds and timber is highly likely to have been more than from *export-only* taxes. The *Nest Report* adjusted tax rates upwards to 20% (for diamonds) and 8% (for timber) to reflect likely additional taxes and, in the case of diamonds, to reflect likely comparable tax rates to other minerals.

## D. Revision to Estimated Quantity of Gold Production

129. In preparing this response an error was identified in the estimation of quantity and valuation data for gold. This section addresses this error.
130. The error concerns estimated Ugandan formal exports of gold. Note (c) of Table A4.5.1.3 of the *Nest Report* stated that data at L4 ("Formal exports") contained data from Table 8.2 of Uganda's *Counter-Memorial* (§8.65). In fact, the data at L4 of Table A4.5.1.3 are only based

---

<sup>75</sup> The *Nest Report* erroneously attributed the publication noted as 'Johnson and Tegera (2002)'. It should have been attributed to 'Tegera, Mikolo and Johnson (2002)' as contained in this report's List of References.

on Table 8.2 for 1998 and 1999, whereas data for 2000-2003 are based on Table 8.1 of Uganda's *Counter-Memorial* (§8.64).

130.1 Uganda's *Counter-Memorial* explains that Table 8.1 data were updated by the Bureau of Statistics and the updated data are in Table 8.2. The latter should have been used in the *Nest Report* for all years from 1998 to 2003. The two datasets are shown in Table 4.D1.1 (full years) and Table 4.D1.2 (five months only for 1998 and 2003).

**Table 4.D1.1: Uganda *Counter-Memorial*: gold exports (kgs): Tables 8.1 and 8.2 (Full Year)**

Full year:	1998	1999	2000	2001	2002	2003
Table 8.1 (old)	665.00	4,231.00	5,297.00	6,161.00	7,117.00	3,478.00
Table 8.2 (updated)	2,247.00	4,231.00	5,926.00	6,158.00	7,086.00	3,275.00

Source: Uganda Bureau of Statistics as reported by Uganda (2018), pp.366-367.

**Table 4.D1.2: Uganda *Counter-Memorial*: gold exports (kgs): Tables 8.1 and 8.2 (1998 and 2003 at five months only)**

	1998*	1999	2000	2001	2002	2003*
Table 8.1 (old)	277.08	4,231.00	5,297.00	6,161.00	7,117.00	1,449.17
Table 8.2 (updated)	936.25	4,231.00	5,926.00	6,158.00	7,086.00	1,364.58

Source: Uganda Bureau of Statistics as reported by Uganda (2018), pp.366-367.

131. The updated data from Uganda's *Counter-Memorial* Table 8.2 need to replace those in the *Nest Report's* L4 of Table A4.5.1.3, and calculations in subsequent tables based on these data also need to be adjusted. These adjustments to quantities require further revision to the overall estimated quantity and value of gold produced in the UAI (both Ituri and non-Ituri).

131.1 Calculation methods are the same as the *Nest Report*.

131.2 Revised tables showing *calculations of value* (as found in Appendix 4.5 of the *Nest Report*) are at Appendix 4.3 of this report.

132. Below are all the tables from the *Nest Report* adapted where necessary to take into account the revised estimate for gold from the UAI. If a table required no revision, it is still shown here but with the comment "no change to this table".

132.1 Data that have been adjusted are in bold red font.

**Table D4.1 Est. of quantity of resources produced, 1998-2003 - *Revised from Nest Report* (§224)**

\* Note: only UAI data included in this version - no references to DRC totals.

	Ituri		Non-Ituri		Total UAI
	Est. Quantity	% of UAI	Est. Quantity	% of UAI	Est. Quantity
<b>Gold, kgs</b>	<b>10,681</b>	45	<b>13,054</b>	55	<b>23,735</b>
Diamonds, carats	213,031	5	4,047,596	95	4,260,627
Coltan, kgs	4,204	5	79,878	95	84,082
Tin, kgs	44,521	5	845,907	95	890,428
Tungsten, kgs	16,541	5	314,284	95	330,825
Timber, kgs	44,684,690	50	44,684,690	50	89,369,380
Coffee, kgs	13,133,802	30	30,645,539	70	43,779,341



**Table D4.2: Annual average resource prices, by year - Table at §304; no change to this table.**

\* Price is per kilogram except for diamonds, which is per carat

	1998	1999	2000	2001	2002	2003
<b>Gold</b> base price	9,455.20	8,956.22	8,973.26	8,714.13	9,956.43	11,680.99
Adopted price (35% less)	6,145.88	5,821.54	5,832.62	5,664.18	6,471.68	7,592.64
<b>Diamond</b> base price	18.59	12.55	14.34	18.79	19.33	27.43
Adopted price (35% less)	12.09	8.16	9.32	12.21	12.56	17.83
<b>Niobium-Tantalite</b> base price	12.98	47.90	114.62	86.73	47.24	14.11
Adopted price (35% less)	8.44	31.14	74.50	55.07	30.71	9.17
<b>Cassiterite</b> base price	3.27	2.31	2.82	3.12	3.10	6.35
Adopted price (35% less)	2.12	1.50	1.83	2.03	2.02	4.12
<b>Wolframite</b> base price	2.48	2.00	3.49	3.34	2.87	3.66
Adopted price (35% less)	1.61	1.30	2.27	2.17	1.86	2.38
<b>Timber</b> base price	0.67	0.67	0.52	0.62	0.52	0.64
Adopted price (35% less)	0.44	0.44	0.35	0.40	0.34	0.42
<b>Coffee</b> base price	2.04	1.71	1.42	1.18	1.04	1.06
Adopted price (35% less)	1.33	1.11	0.92	0.77	0.68	0.69
<i>Inflator to est. 2020 USD (adopted for all)</i>	<i>x 1.60</i>	<i>x 1.56</i>	<i>x 1.51</i>	<i>x 1.47</i>	<i>x 1.45</i>	<i>x 1.41</i>

**Table D4.3: Resource prod. in 2020 USD before value exploited - Revised from Nest Report (§304)**

	Ituri		Non-Ituri		Total UAI
	USD	% of UAI	USD	% of UAI	USD
Gold	<b>97,273,995</b>	45	<b>118,890,439</b>	55	<b>216,164,434</b>
Diamonds	3,526,598	5	67,005,369	95	70,531,967
Coltan	219,263	5	4,165,988	95	4,385,250
Tin	150,462	5	2,858,783	95	3,009,245
Tungsten	47,969	5	911,411	95	959,380
Timber	25,816,095	50	25,816,095	50	51,632,189
Coffee	20,651,545	30	48,186,938	70	68,838,483
<b>Total*</b>	<b>\$ 147,685,927</b>		<b>\$ 267,835,023</b>		<b>\$ 415,520,948</b>

\* Rounding may cause totals in this table, and between this table and the revised Excel calculations spreadsheet, to differ by ≤ one dollar.

**Table D4.4: Est. value exploited by personnel: UAI, Ituri & non-Ituri, Revised from Corrigenda (§305)**

	Ituri		Non-Ituri		Total UAI	
	2020 USD	% share	2020 USD	% share	2020 USD	% share
<b>Gold</b>	<b>35,359,097.3</b>	<b>85.5</b>	<b>10,533,692.9</b>	<b>60.1</b>	<b>45,892,790.2</b>	<b>78.0</b>
<b>Diamonds</b>	1,013,897.0	<b>2.5</b>	5,025,402.6	<b>28.7</b>	6,039,299.7	<b>10.3</b>
<b>Coltan</b>	63,038.0	<b>0.2</b>	312,449.1	<b>1.8</b>	375,487.0	<b>0.6</b>
<b>Tin</b>	43,257.9	<b>0.1</b>	214,408.7	<b>1.2</b>	257,666.6	<b>0.4</b>
<b>Tungsten</b>	13,791.1	<b>0.0</b>	68,355.8	<b>0.4</b>	82,146.9	<b>0.1</b>
<b>Timber</b>	2,793,301.4	<b>6.8</b>	645,402.4	<b>3.7</b>	3,438,703.8	<b>5.8</b>
<b>Coffee</b>	2,046,568.1	<b>5.0</b>	722,804.1	<b>4.1</b>	2,769,372.2	<b>4.7</b>
<b>Total*</b>	<b>41,332,950.8</b>	<b>100.1</b>	<b>17,522,515.6</b>	<b>100.0</b>	<b>58,855,466.4</b>	<b>99.9</b>

\* Rounding may cause totals in this table, and between this table and the revised Excel calculations spreadsheet, to differ by ≤ one dollar.

**Table D4.5: Est. of proxy taxes on theft and fees & licences, and tax on profits as percentages - Table at §119; no change to this table.**

	A. Proxy Tax: Theft		B. Proxy Tax: Fees and Licences		C. Tax on Value: Sales and Exports		Total Tax Rate (A+B+C)	
	Ituri	Non-Ituri	Ituri	Non-Ituri	Ituri	Non-Ituri	Ituri	Non-Ituri
Gold	5.0	2.0	5.0	2.0	28.0	5.0	38.0	9.0
Diamonds	5.0	0.5	5.0	2.0	20.0	5.0	30.0	7.5
Coltan	5.0	0.5	5.0	2.0	20.0	5.0	30.0	7.5
Tin	5.0	0.5	5.0	2.0	20.0	5.0	30.0	7.5
Tungsten	5.0	0.5	5.0	2.0	20.0	5.0	30.0	8.0
Timber	2.0	0.5	1.0	1.0	8.0	1.0	11.0	2.5
Coffee	1.0	0.0	1.0	0.5	8.0	1.0	10.0	2.0

**Table D4.6: Est. proxy tax rate for theft - Table at §124; no change to this table.**

Resource	Ituri (%)	Non-Ituri (%)
Gold	5.0	2.0
Diamonds	5.0	0.5
Coltan	5.0	0.5
Tin	5.0	0.5
Tungsten	5.0	0.5
Timber	2.0	0.5
Coffee	1.0	0.0

**Table D4.7: Est. proxy tax rate for value of fees and licences - Table at §143; no change to this table.**

Resource	Ituri (%)	Non-Ituri (%)
Gold	5.0	2.0
Diamonds	5.0	2.0
Coltan	5.0	2.0
Tin	5.0	2.0
Tungsten	5.0	2.0
Timber	1.0	1.0
Coffee	1.0	0.5

**Table D4.8: Tax range and adopted tax on value - Table at §147; no change to this table.**

Resource	Tax Range Reported (%) (See Annex 4)	Adopted Taxes on Value	
		Ituri (%)	Non-Ituri (%)
Gold	28-40	28.0	5.0
Diamonds	4-15	20.0	5.0
Coltan	5-40	20.0	5.0
Tin	5-50	20.0	5.0
Tungsten	n/a	20.0	5.0
Timber	6	8.0	1.0
Coffee	7	8.0	1.0

**Table D4.9: Value of exploitation disaggregated by method, Ituri and non-Ituri, 2020 USD - *Revised***  
*from Nest Report (§154)*

	Theft		Fees & Licences		Tax of Value		Total	
	Ituri	Non-Ituri	Ituri	Non-Ituri	Ituri	Non-Ituri	Ituri	Non-Ituri
Gold	<b>4,863,700</b>	<b>2,377,809</b>	<b>4,620,515</b>	<b>2,330,253</b>	<b>25,874,883</b>	<b>5,825,631</b>	<b>35,359,097.3</b>	<b>10,533,692.9</b>
Diamonds	176,330	335,027	167,513	1,340,107	670,054	3,350,268	1,013,897.0	5,025,402.6
Coltan	10,963	20,830	10,415	83,320	41,660	208,299	63,038.0	312,449.1
Tin	7,523	14,294	7,147	57,176	28,588	142,939	43,257.9	214,408.7
Tungsten	2,398	4,557	2,279	18,228	9,114	45,571	13,791.1	68,355.8
Timber	516,322	129,080	252,998	258,161	2,023,982	258,161	2,793,301.4	645,402.4
Coffee	206,515	0	204,450	240,935	1,635,602	481,869	2,046,568.1	722,804.1
<b>Total*</b>	<b>5,783,751</b>	<b>2,881,597</b>	<b>5,265,317</b>	<b>4,328,180</b>	<b>30,283,883</b>	<b>10,312,738</b>	<b>41,332,950.8</b>	<b>17,522,515.6</b>

\* Rounding may cause totals in this table, and between this table and the revised Excel calculations spreadsheet, to differ by ≤ one dollar.

## Appendix 4.1: Terms of Reference

The ICJ provided the following terms of reference (TOR) to guide this report:

*(1) An expert opinion shall be obtained, which will be entrusted to four independent experts appointed by Order of the Court after hearing the Parties.*

*(2) For the purposes of determining the reparation owed to the Democratic Republic of the Congo by Uganda for the injury caused as a result of the breach by Uganda of its international obligations, as determined by the Court in its 2005 Judgment, the Court continues to examine the full range of claims and defences to the heads of damage claimed by the Applicant. However, with respect to some of these heads of damage, namely, loss of human life, loss of natural resources and property damage, the Court considers it necessary to arrange for an expert opinion, in accordance with Article 67, paragraph 1, of its Rules. The terms of reference for the experts referred to in point (1) above will be as follows:*

### **II. Loss of natural resources**

*(a) Based on the evidence available in the case file and documents publicly available, particularly the United Nations Reports mentioned in the 2005 Judgment, what is the approximate quantity of natural resources, such as gold, diamond, coltan and timber, unlawfully exploited during the occupation by Ugandan armed forces of the district of Ituri in the relevant period?*

*(b) Based on the answer to the question above, what is the valuation of the damage suffered by the Democratic Republic of the Congo for the unlawful exploitation of natural resources, such as gold, diamond, coltan and timber, during the occupation by Ugandan armed forces of the district of Ituri?*

*(c) Based on the evidence available in the case file and documents publicly available, particularly the United Nations Reports mentioned in the 2005 Judgment, what is the approximate quantity of natural resources, such as gold, diamond, coltan and timber, plundered and exploited by Ugandan armed forces in the Democratic Republic of the Congo, except for the district of Ituri, and what is the valuation of those resources?*

*(3) The references to the administrative divisions on the territory of the Democratic Republic of the Congo mentioned above should be understood as those that existed in the Democratic Republic of the Congo during the relevant period, i.e. between 6 August 1998 and 2 June 2003.*

## Appendix 4.2: List of References

- Baker, M., R. Clausen, M. N’Goma, T. Roule, and J. Thomson, 2003. “Democratic Republic of Congo”, Volume 3 (pp.7–115) in *Conflict timber, dimensions of the problem in Asia and Africa*. Report submitted to USAID. Burlington, Vermont: ARD.
- Dam-de Jong, Daniëlla, 2015. *International Law and Governance of Natural Resources in Conflict and Post-Conflict Situations* (London: Cambridge University Press)
- Democratic Republic of the Congo, 2021. *Case Concerning Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda). Second Phase. Question of Reparation. Observations of the Democratic Republic of the Congo on the Experts’ Report of 19 December 2020*. 14 February 2021.
- Democratic Republic of the Congo, 2018. *Case Concerning Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda). Second Phase. Question of Reparation. Counter-Memorial of the Democratic Republic of the Congo*. February 2018.
- Djiré, A. 2003. *Le secteur informel du bois d’oeuvre. Rapport d’appui à la revue du secteur forestier en RDC–Rapport technique*. Montpellier : Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD).
- Garrett, N., 2008. *Artisanal Cassiterite Mining and Trade in North Kivu. Implications for Poverty Reduction and Security*. Communities and Artisanal & Small-scale Mining Initiative (CASMI). Washington DC: World Bank.
- HRW (Human Rights Watch), 2005. *The Curse of Gold: Democratic Republic of Congo*. New York. <https://www.hrw.org/sites/default/files/reports/drc05050.pdf>
- ICO (International Coffee Organization), 2020. Historical Data on the Global Coffee Trade. <http://www.ico.org/newhistorical.asp>
- IPIS (International Peace Information Service), 2002. *Supporting the War Economy in the DRC: European Companies and the Coltan Trade: Five Case Studies*. (Eds) M-O. Herman, D. Broederlijk and P. Vermaerke. Antwerp.
- Johnson, Dominic and Aloys Tegera, 2007. *Rules for Sale: formal and informal cross-border trade in eastern DRC*. Goma: Pole Institute.
- , 2005. *Digging Deeper: How the DR Congo’s mining policy is failing the country*. Goma: Pole Institute. <http://archive.niza.nl/docs/200603061556507567.pdf>
- Le Billon, P. and C. Hocquard, 2007. Filières industrielles et conflits armés: le cas du tantale dans la région des Grands Lacs. *Écologie & Politique* 34: 83-92.
- Liberia, Republic of, 2009. *Truth and Reconciliation Commission, Volume III: Appendices, Title III: Economic Crimes and the Conflict, Exploitation and Abuse* (Monrovia: Liberia) <http://www.trcofliberia.org/resources/reports/final/volume-three-3layout-1.pdf>
- Lundberg, Michael A., 2008. The plunder of natural resources during war: a war crime (?). *Georgetown Journal of International Law* 39(3); 495-525.
- Martineau, Patrice, 2003. *La route commerciale du coltan: une enquête*. Groupe de recherche sur les activités minières en Afrique, Faculté de science politique et de droit, Université de Québec, Montréal. <https://www.ieim.uqam.ca/IMG/pdf/Martineaucoltan.pdf>

- Mthembu-Salter, G., 2015. "Baseline study four: Gold trading and export in Kampala, Uganda. 9<sup>th</sup> Multi-stakeholder forum on responsible mineral supply chains", 4-6 May 2015. Paris, France. <https://www.oecd.org/daf/inv/mne/Gold-Baseline-Study-4.pdf>
- Nuernberg Military Tribunal, 1949. *Trials of War Criminals Before the Nuernberg Military Tribunals*, Vol. XIV "The Ministries Case". <https://www.loc.gov/rr/frd/MilitaryLaw/pdf/NTwar-criminalsVol-XIV.pdf>
- Ortino, Federico and Nima Mersadi Tabari, 2016. "International Dispute Settlement: The Settlement of Disputes Concerning Natural Resources — Applicable Law and Standards of Review" Ch.24 in *Research Handbook on International Law and Natural Resources*, E. Morgera & K. Kulovesi, eds (London: Edward Elgar Publishing): 496-516.
- Redmond, Ian, 2001. *Coltan Boom. Gorilla Bust. The impact of coltan mining on gorillas and other wildlife in Eastern DR Congo*. Atlanta: Dian Fossey Gorilla Fund and Horsham, UK: Born Free Foundation.
- Tegera, Aloys, Sophie Mikolo, and Dominic Johnson, 2002. *The Coltan Phenomenon. How a rare mineral has changed the life of the population of war-torn North Kivu province in the East of the Democratic Republic of Congo*. Goma: Pole Institute.
- Uganda, 2021. *Case Concerning Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda). Second Phase. Question of Reparation. Observations on the Experts Report dated 19 December 2020*. 15 February 2021.
- , 2018. *Case Concerning Armed Activities on the Territory of the Congo. Democratic Republic of the Congo v. Uganda. Counter-Memorial of Uganda on Reparations. Volume 1*. 6 February 2018.
- Umunay, Peter, 2011. *Illegal Logging in Congo Basin - Ituri Case Study*. Global Forest Atlas.
- UN ComTrade, 2020. Export and Import data website: UNPE (UN Panel of Experts), 2002a. *Report of the UN Panel of Experts on the Illegal Exploitation of Natural Resources in the DR Congo*. October, New York. (S/2002/1146)
- UNWCC (United Nations War Crimes Commission), 1948. *The Polish Forestry Case No. 7150*. History of the United Nations War Crimes Commission and the Development of the Laws of War 485, 496 (London: His Majesty's Stationery Office).
- UNPE (UN Panel of Experts), 2002a. *Report of the UN Panel of Experts on the Illegal Exploitation of Natural Resources in the DR Congo*. October, New York. (S/2002/1146)
- , 2002b. *Interim Report of the UN Panel of Experts on the Illegal Exploitation of Natural Resources in the DR Congo*. October, New York. (S/2002/565)
- , 2001a. *Report of the UN Panel of Experts on the Illegal Exploitation of Natural Resources in the DR Congo*. April, New York. (A/2001/357)
- , 2001b. *Addendum to the Report of the UN Panel of Experts on the Illegal Exploitation of Natural Resources in the DR Congo*. November, New York. (S/2001/1072)
- World Bank, 2003. *World Development Indicators*. <https://openknowledge.worldbank.org/handle/10986/13920>

### Appendix 4.3: Revised Tables for Gold

*Note: there are no changes to Table A5.1.1 and Table A5.1.2 from the Nest Report.*

#### A5.1 Gold

Table A5.1.1: Quantity, kilograms *1998 and 2003 five months only		1998*	1999	2000 (a) (Jan-Jun)	2000 (a) (Jul-Dec)	2001	2002	2003*	Total
<b>D. R. Congo - Production</b>									
1	Formal production (b)	62.90	207.00	26.00	26.00	6,100.00	7,600.00	1,708.33	15,730.23
2	Assume 80% of L1 from non-Government area (c)	50.33	165.60	20.80	20.80	4,880.00	6,080.00	1,366.67	12,584.20
3	75% of L2 in UAI to June 2000; 70% in UAI from July 2000 (d)	37.75	124.20	15.60	14.56	3,416.00	4,256.00	956.67	8,820.78
4	Add est. national artisanal production (e)	2,083.33	5,000.00	2,500.00	2,500.00	5,000.00	5,000.00	2,083.33	24,166.66
5	80% of L4 in non-Govt held	1,666.67	4,000.00	2,000.00	2,000.00	4,000.00	4,000.00	1,666.67	19,333.34
6	75% of L6 in UAI to June 2000; 70% in UAI from July 2000 (d)	1,250.00	3,000.00	1,500.00	1,400.00	2,800.00	2,800.00	1,166.67	13,916.67
<b>7</b>	<b>Total Est. UAI Production (R3 + R6)</b>	<b>1,287.75</b>	<b>3,124.20</b>	<b>1,515.60</b>	<b>1,414.56</b>	<b>6,216.00</b>	<b>7,056.00</b>	<b>2,123.33</b>	<b>22,737.44</b>

- 2000 is split into two six-month periods to reflect Uganda's loss of influence in Kisangani after June 2000. Loss of influence reduced the ability of UPDF personnel to extract value from gold in Kisangani.
- Based on USGS data (most recent Yearbook)
- See text for explanation.
- Est. UAI share was 75% of non-government held area to June 2000, then 70% from July 2000.
- See text for explanation. Base estimate used was 5,000 kg per year for the DRC revised accordingly for non-government-held area, then UAI.

<b>Table A5.1.2: DRC Congo gold exports</b> <i>*1998 and 2003 five months only</i>									
	<b>1998*</b>	<b>1999</b>	<b>2000 (a)</b> (Jan-Jun) (Jul-Dec)		<b>2001</b>	<b>2002</b>	<b>2003*</b>	<b>Total</b>	
<b>D. R. Congo - Exports</b>									
1	Formal exports (b)	419.58	241.56	412.50	412.50	887.00	527.00	1.25	2,901.39
2	Assume 80% of L1 from non-Govt area (c)	335.67	193.25	330.00	330.00	709.60	421.60	1.00	2,321.12
3	Est. formal exports from UAI: 75% of L2 to June 2000; 70% from July 2000 (d)	251.75	144.94	247.50	231.00	496.72	295.12	0.70	1,667.73
4	<b>Est. UAI production from L7, Table A5.1.1</b>	<b>1,287.75</b>	<b>3,124.20</b>	<b>1,515.60</b>	<b>1,414.56</b>	<b>6,216.00</b>	<b>7,056.00</b>	<b>2,123.33</b>	<b>22,737.44</b>
5	<b>UAI production minus exports (L4 - L3), i.e., smuggled gold.</b>	<b>1,036.00</b>	<b>2,979.26</b>	<b>1,268.10</b>	<b>1,183.56</b>	<b>5,719.28</b>	<b>6,760.88</b>	<b>2,122.63</b>	<b>22,069.71</b>

a. 2000 is split into two six month periods to reflect Uganda's loss of influence in Kisangani after June 2000.

b. Based on ComTrade import data for "All" reporters.

c. See text for explanation.

d. Est. UAI share was 75% of total non-government held area to June 2000, then 70% from July 2000.



Table A5.1.3: Uganda gold production and exports *1998 and 2003 five months only		1998*	1999	2000	2001	2002	2003*	Total
<b>Uganda - Production and Exports</b>								
1	Formal production (a)	3.33	5.00	56.00	0.00	3.00	16.67	84.00
2	Est. artisanal production (b)	416.67	1,000.00	1,000.00	1,000.00	1,000.00	416.67	4,833.34
3	Est. total production (L1 + L2)	420.00	1,005.00	1,056.00	1,000.00	1,003.00	1,040.00	5,524.00
4	<b>Formal exports (c)</b>	<b>936.25</b>	<b>4,231.00</b>	<b>5,926.00</b>	<b>6,158.00</b>	<b>7,086.00</b>	<b>1,364.58</b>	<b>25,701.83</b>
5	<b>Exports surplus to production: assume from UAI (L4 - L3) (d)</b>	<b>516.25</b>	<b>3,226.00</b>	<b>4,870.00</b>	<b>5,158.00</b>	<b>6,083.00</b>	<b>324.58</b>	<b>20,177.83</b>

a. Based on USGS data (most recent Yearbook)

b. See text for explanation of 1,000 kg estimate per year.

c. Based on Uganda Bureau of Statistics data in Table 8.2 in *Case Concerning Armed Activities on the Territory of the Congo. Democratic Republic of the Congo v. Uganda. Counter-Memorial of Uganda on Reparations. Volume 1. 6 February 2018* (Uganda).

d. Uganda exports excess to production assumed to be UAI-origin because during the 1998-2003 period: cross-border trade in gold between Uganda and either Rwanda or Burundi unlikely; Kenya produced and exported gold, but no reason for traders to bring DRC gold to export from Kenya if possible from Uganda; Central African Republic production unlikely to have transited through the DRC to Uganda; and Sudanese production unlikely to have been exported via Uganda.

Table A5.1.4: UAI smuggled gold v. Ugandan export 'surplus'. *1998 and 2003 5mth only		1998*	1999	2000	2001	2002	2003*	Total
<b>Comparison of UAI smuggled gold v. Uganda exports surplus to production (a)</b>								
1	UAI smuggled gold (Table A5.1.2: L5)	1,036.00	2,979.26	2,451.66	5,719.28	6,760.88	2,122.63	22,069.71
2	Ugandan exports surplus to production (Table A5.1.3: L5)	<b>516.25</b>	3,226.00	<b>4,870.00</b>	<b>5,158.00</b>	<b>6,083.00</b>	<b>324.58</b>	<b>20,177.83</b>
3	<b>Take highest yearly est. from L1 or L2 (b)</b>	1,036.00 (from DRC)	3,226.00 (from Ug.)	<b>4,870.00</b> (from Ug.)	5,719.28 (from DRC)	6,760.88 (from DRC)	2,122.63 (from DRC)	<b>23,737.79</b>
4	<b>Est. quantity produced in UAI:</b>	<b>1,036.00</b>	<b>3,226.00</b>	<b>4,870.00</b>	<b>5,719.28</b>	<b>6,760.88</b>	<b>2,122.63</b>	<b>23,734.79</b>

a. The difference between DRC smuggled gold and Ugandan exports surplus to production is assumed to be that portion of gold from UAI that transitted through Uganda to the international market but was not captured in any statistics.

b. Because the difference between the DRC and Ugandan data cannot be reconciled, and given that both sets of data are based on conservative estimates of informal production and trade, it was reasonable to taken the highest yearly estimate from either L1 or L2 as the likely quantity smuggled from UAI into Uganda.

**Gold: Value, USD**

<b>Table A5.1.5</b>		<b>1998*</b>	<b>1999</b>	<b>2000 (a)</b>	<b>2001</b>	<b>2002</b>	<b>2003*</b>	<b>Total</b>
<b>*1998 and 2003 five months only</b>								
1	Est. quantity produced in UAI (b)	<b>1,036.00</b>	<b>3,226.00</b>	<b>4,870.00</b>	<b>5,719.28</b>	<b>6,760.88</b>	<b>2,122.63</b>	<b>23,734.79</b>
2	Est. price, USD per kg (c)	6,145.88	5,821.54	5,832.62	5,664.18	6,471.68	7,592.64	
3	Total (L1 x L2) (d)	\$6,367,132	\$18,780,288	<b>\$28,404,859</b>	\$32,395,031	\$43,754,252	\$16,116,365	<b>\$145,817,927</b>
4	To get 2020 USD multiply L3 by... (e)	1.60	1.56	1.51	1.47	1.45	1.41	
<b>5</b>	<b>Est. total value in 2020 USD (L3 x L4)</b>	<b>\$10,187,411</b>	<b>\$29,297,249</b>	<b>\$42,891,338</b>	<b>\$47,620,696</b>	<b>\$63,443,665</b>	<b>\$22,724,075</b>	<b>\$216,164,434</b>

a. Jan-Jun and Jul-Dec periods for 2000 have been merged back into a single year.

b. From L5 in Table A5.1.4.

c. Prices based on World Gold Council price database annual averages, accessed on 6 December 2020: From World Gold Council: <https://www.gold.org/goldhub/data/gold-prices>. Annual price was then reduced by 35% to better reflect probable price at points of opportunities for exploitation in the DRC. This base price and the original adopted price are shown in Table 2.

d. Total figures rounded-up (no cents included).

e. Rates taken from US Inflation Calculator, based on US Government CPI data published on October 13, 2020, which uses US Labor Dept Bureau of Labor Statistics data: <https://www.usinflationcalculator.com>.

**Gold: Quantity and value distribution across Ituri and Non-Ituri, 2020 USD**

<b>Table A5.1.6</b>		<b>Ituri (a)</b>	<b>%</b>	<b>Non-Ituri (a)</b>	<b>%</b>	<b>Total UAI</b>
1	Quantity (kilograms)	<b>10,681</b>	45%	<b>13,054</b>	55%	<b>23,735</b>
<b>2</b>	<b>Base value of quantity (b)</b>	<b>\$97,273,995</b>	<b>45%</b>	<b>\$118,890,439</b>	<b>55%</b>	<b>\$216,164,434</b>
3	Est. value of Theft (c)	4,863,699.8	5.00%	2,377,808.8	2.00%	7,241,508.6
4	Est. Fees & Licences (d)	4,620,514.8	5.00%	2,330,252.6	2.00%	6,950,767.4
5	Est. of Taxes on Value (e)	25,874,882.7	28.00%	5,825,631.5	5.00%	31,700,514.2
<b>6</b>	<b>Est. value of damages, USD</b>	<b>\$35,359,097.3</b>		<b>\$10,533,692.9</b>		<b>\$45,892,790.2</b>

a. See text for explanation of Ituri and non-Ituri share of quantity and value

b. From Total from L5 in previous table

c. See text for explanation of proxy 'theft tax'.

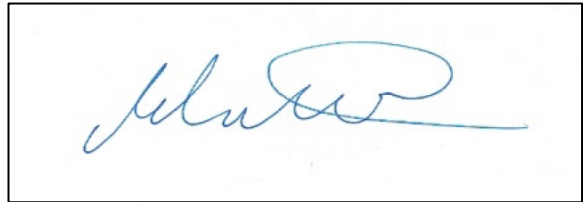
d. See text for explanation of proxy 'tax on fees and licences'.

e. See text for explanation of tax on value.

#### Appendix 4.4: Signature of Expert

This report has been prepared in accordance with the terms of reference set out by the International Court of Justice by MICHAEL NEST on 1 March 2021:

Signed:



**Revised calculations for natural resources**  
**(referred to in paragraphs 131-132 of Mr. Nest's response)**

Resource	Production Value, USD 2020		% of Total	Area Share		Basic Value of Quantity by Area, USD 2020		Proxy Tax: Theft (E x G)			Remaining Value After Theft (B - H, I)
	All UAI			Area	% Share	(B x E)	%	Ituri	Non-Ituri		
<b>Gold</b>	216,164,434		52.0	Ituri	45%	97,273,995	5%	4,863,700		92,410,296	
				Non-Ituri	55%	118,890,439	2%		2,377,809	116,512,630	
<b>Diamonds</b>	70,531,967		17.0	Ituri	5%	3,526,598	5%	176,330		3,350,268	
				Non-Ituri	95%	67,005,369	0.5%		335,027	67,005,369	
<b>Coltan</b>	4,385,250		1.1	Ituri	5%	219,263	5%	10,963		208,299	
				Non-Ituri	95%	4,165,988	0.5%		20,830	4,165,988	
<b>Tin</b>	3,009,245		0.7	Ituri	5%	150,462	5%	7,523		142,939	
				Non-Ituri	95%	2,858,783	0.5%		14,294	2,858,783	
<b>Tungsten</b>	959,380		0.2	Ituri	5%	47,969	5%	2,398		45,571	
				Non-Ituri	95%	911,411	0.5%		4,557	911,411	
<b>Timber</b>	51,632,189		12.4	Ituri	50%	25,816,095	2%	516,322		25,299,773	
				Non-Ituri	50%	25,816,095	0.5%		129,080	25,816,095	
<b>Coffee</b>	68,838,483		16.6	Ituri	30%	20,651,545	1%	206,515		20,445,029	
				Non-Ituri	70%	48,186,938	0.0%		-	48,186,938	
	<b>415,520,948</b>				<b>100%</b>	<b>68,838,483</b>					
						<b>415,520,948</b>		<b>5,783,752</b>	<b>2,881,597</b>	<b>407,359,388</b>	
<b>Proxy Theft:</b>				<b>All UAI</b>							
	5,783,752			Ituri		8,665,349					
				Non-Ituri		2,881,597					
<b>Proxy F&amp;L:</b>	5,265,317					9,593,496					
<b>Profits Tax:</b>	30,283,882					40,596,622					
<b>Grand Total:</b>	<b>41,332,950.8</b>					<b>58,855,466.3</b>					
						<b>17,522,515.5</b>					

Proxy Tax: Fees and Licences on Remaining Value (J x K)			Tax on Profits or Exports of Remaining Value (J x N)			Total Value Extracted, by Area					
%	Ituri	Non-Ituri	%	Ituri	Non-Ituri	Ituri (G+K+N)	%	Non-Ituri (H+L+O)	%	Total UAI (I+M+P)	%
5%	4,620,515	2,330,253	28.0%	25,874,883	5,825,631	35,359,097.3	85.5	10,533,692.9	60.1	45,892,790.2	78.0
2%			5.0%								
5%	167,513	1,340,107	20.0%	670,054	3,350,268	1,013,897.0	2.5	5,025,402.6	28.7	6,039,299.7	10.3
2%			5.0%								
5%	10,415	83,320	20.0%	41,660	208,299	63,038.0	0.2	312,449.1	1.8	375,487.0	0.6
2%			5.0%								
5%	7,147	57,176	20.0%	28,588	142,939	43,257.9	0.1	214,408.7	1.2	257,666.6	0.4
2%			5.0%								
5%	2,279	18,228	20.0%	9,114	45,571	13,791.1	0.0	68,355.8	0.4	82,146.9	0.1
2%			5.0%								
1%	252,998	258,161	8.0%	2,023,982	258,161	2,793,301.4	6.8	645,402.4	3.7	3,438,703.8	5.8
1%			1.0%								
1%	204,450	240,935	8.0%	1,635,602	481,869	2,046,568.1	5.0	722,804.1	4.1	2,769,372.2	4.7
0.5%			1.0%								
	<b>5,265,317</b>	<b>4,328,179</b>		<b>30,283,882</b>	<b>10,312,739</b>	<b>41,332,950.8</b>	<b>100.0</b>	<b>17,522,515.5</b>	<b>100.0</b>	<b>58,855,466.3</b>	<b>100.0</b>