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Journal of Mathematics Instruction, Social Research and Opinion Vol. 4, No. 4, December 2025, pp. 1389 – 1404, https://doi.org/10.58421/misro.v4i4.884 ISSN 2962-7842 1389 Journal homepage: https://journal-gehu.com/index.php/misro Valuing Environmental Damage as State Financial Loss in Corruption Cases: A Substantive Justice Analysis of The Harvey Moeis Verdicts Laily Maghfiroh1, Abdul Kholiq2 1,2 Faculty of Law, Universitas Pembangunan Nasional Veteran Jakarta Article Info ABSTRACT Article history: Received 2025-12-03 Revised 2025-12-17 Accepted 2025-12-20 This study examines the regulatory framework for assessing environmental damage as a basis for establishing state financial losses in corruption cases and analyzes judicial reasoning in sentencing to realize substantive justice. It addresses a key gap in Indonesian legal practice: the absence of an integrated framework linking environmental damage valuation to state loss calculations, and the limited inclusion of ecological restoration costs in criminal sanctions. The research employs a normative juridical method, drawing on legislative, conceptual, case-based, and comparative approaches, supported by primary, secondary, and tertiary legal materials. Data were obtained through a literature review and limited structured interviews with environmental law experts and practitioners. Within the normative juridical framework, the interviews serve solely as supplementary secondary data to complement and confirm the normative analysis of statutory regulations, particularly to verify the adequacy and practical applicability of the legal framework governing environmental damage assessment and state financial loss calculation. Legal materials were analyzed using qualitative descriptive analysis. The findings indicate that environmental damage calculations rely on ecological components regulated under the Environmental Protection and Management Law, Ministry of Environment Regulation No. 7 of 2014, and Government Regulation No. 22 of 2021. In the sentencing of Harvey Moeis and Nur Alam, judges emphasized abuse of authority, official position, degree of culpability, and motive; however, ecological restoration costs were not systematically integrated into sentencing, thereby constraining the realization of substantive justice. This study recommends adopting a unified guideline linking environmental damage valuation to

state financial losses and mandating the incorporation of environmental restoration obligations into criminal sentencing. The research is limited to two court decisions and does not include a broader empirical analysis of sentencing patterns. Keywords: Corruption Environmental Damage Assessment State Financial Losses Substantive Justice This is an open-access article under the CC BY-SA license. Corresponding Author: Laily Maghfiroh 28 Universitas Pembangunan Nasional Veteran Jakarta Email: 2210611099@mahasiswa.upnvj.ac.id

https://doi.org/10.58421/misro.v4i4.884 1390 1. INTRODUCTION Corruption in Indonesia is a serious problem that the government must address, but efforts to eradicate it have been neither effective nor efficient. The term corruption comes from the Latin word corruptio, which means to damage or rot, reflecting dishonest actions and moral deviations, which was then absorbed into English as corruption, Dutch as corruptie, and Indonesian as korupsi. According to the Indonesian Dictionary (KBBI), corruption is the misuse of state funds for personal gain or the gain of others [1], while Todung Mulya Lubis defines it as a violation of the law committed by abusing power for personal or group gain. Legally, corruption is regulated in Law Number 31 of 1999 jo. Law Number 20 of 2001 concerning the Eradication of Corruption Crimes (Tipikor Law), which also imposes additional penalties, including asset confiscation to recover state financial losses through court decisions [2]. Law enforcement efforts against corruption have been sharply criticized because the sentences handed down are considered disproportionate to the amount of state losses, and there are concerns about the integrity of law enforcement officials, which is seen as giving perpetrators of corruption the space to continue their actions. As a result, the justice that is created is often only procedural and has not achieved substantive justice. Salman Luthan distinguishes between procedural justice, which guarantees the legal rights of all parties in the judicial process, and substantive justice, which is a judge's decision based on honesty, objectivity, impartiality, and conscience [3]. To achieve substantive justice in cases of corruption, in addition to imposing penalties on the perpetrators, judges

need to consider the impact of these criminal acts, including environmental damage and consequences for society, to achieve a balance between legal certainty, benefits, and justice for society. The analysis of state losses due to corruption involves several institutions, including the Attorney General's Office, the Corruption Eradication Commission (KPK), the Supreme Audit Agency (BPK), and the Financial and Development Supervisory Agency (BPKP). BPK auditors are authorized to calculate and report these losses and assess whether there are elements of criminal corruption through a qualitative materiality approach. The calculation is done by comparing the amount that should have been received or spent with what actually happened, then assessing the difference legally and financially [4]. According to Theodorus M. Tuanakotta, there are six methods for calculating state financial losses: total losses, losses after adjustment, net loss value, market-reflective prices, lost opportunity value, and interest, each with a different approach depending on the problem. Choosing the right method is crucial to obtaining accurate results and supporting evidence in corruption cases [5]. State or regional losses are understood as a reduction in assets in the form of money, securities, or tangible items whose value can be determined as a result of unlawful acts, whether intentional or negligent. This is stated in Article 1, point 15, of Law Number 15 of 2006 concerning the BPK, and in Article 1, point 22, of Law Number 1 of 2004 concerning the State Treasury. This definition is also confirmed in Article 1, point 1 of Law Number 17 of 2003 concerning State Finances, which explains that state finances include all rights and obligations that have monetary value, including state-owned assets and resources used in carrying out its duties and responsibilities [5]. State control includes land, water, and natural

 resources based on the provisions of Article 33, paragraph (3) of the 1945 Constitution of the Republic of Indonesia (UUD NRI 1945) [6]. Losses caused by environmental damage are an important factor to be taken into account in the prosecution of corruption cases related to the regulation and use of natural resources, such as tin mining. Provisions regarding this matter are contained in Ministerial

Regulation No. 7 of 2014 concerning environmental damage caused by pollution and/or environmental degradation (Permen LH No. 7/2014), which stipulates that ecological damage is included in the calculation of losses. This recognition is reinforced by Supreme Court Decision Number 2633 K/PID.SUS/2018 (Putusan MA 2633 K/PID.SUS/2018), which accepts the value of environmental damage as part of state losses that can be used as a basis for compensation claims. From the standpoint of environmental law, the definition of pollution in Article 1, points 14 and 15 of Law No. 32 of 2009 concerning Environmental Protection and Management (PPLH Law) defines pollution as the entry of substances or energy into the environment that exceeds quality standards, while environmental damage is defined as changes in environmental characteristics that exceed damage criteria standards. Furthermore, Constitutional Court Decision 25/PUU-XIV/2016 (Putusan MK 25/PUUXIV/2016) confirms that the state can be said to have suffered losses if the losses are real and measurable, not merely potential. The decision also removes the phrase "dapat" from Articles 2 and 3 of the Tipikor Law, which state that the BPK is not the only institution authorized to determine the existence of state losses [5]. In Indonesia, several cases of corruption resulting in environmental damage have been reported, including Judgment Number 70/Pid.Sus-TPK/2024/PN JKT.PST (in Harvey Moeis’s court verdict) and Judgment Number 16/Pid.Sus-TPK/2018/PT.DKI (in Nur Alam’s court verdict). These two cases can be compared in terms of the judges' considerations and the disparity in sentencing, which refers to the difference in punishment for similar cases. One important precedent is corruption in the process of granting mining permits involving the Governor of Southeast Sulawesi, Nur Alam, from 2011–2014. This crime caused environmental and land damage, with ecological losses reaching Rp 2.7 trillion and state financial losses totaling Rp 1.59 trillion. For his actions, Nur Alam was sentenced at the appeal level to 15 years in prison, a fine of Rp 1 billion or 1 year imprisonment, payment of Rp 2.721 billion in compensation, revocation of political rights for 5 years, and confiscation of assets, including a BMW Z4 car, a house in the Premier Estate Complex in East Jakarta, and money from corruption traced by the KPK [7]. On the other hand, the corruption case

involving PT Timah, which implicated Harvey Moeis in the Bangka Belitung Islands in 2018–2022, resulted in losses to the state not only in financial terms but also in the form of massive environmental damage from illegal tin mining. In the first-level verdict, Harvey Moeis was sentenced to 6 years and 6 months in prison, a fine of Rp 1 billion, payment of state financial losses amounting to Rp 210 billion, and confiscation of assets. However, this verdict drew criticism because it was considered not to reflect substantive justice, given that the environmental damage caused was far greater than the calculated state financial losses. Figure 2 shows the audit report on the calculation of state financial losses in the PT Timah corruption case for the period 2018-2022 [8].

https://doi.org/10.58421/misro.v4i4.884 Figure 1. Audit Report on 2 the Calculation of State Financials in the PT Timah Corruption Case for the 20182022 Period Source: Judgment Number 70/Pid.Sus-TPK/2024/PN JKT.PST. The figure shows a breakdown of state losses attributable to a range of activities, including the rental of metal processing equipment and tools to private smelters, the payment of tin ore to PT Timah's mining partners, and environmental damage, totaling 2 Rp 300 trillion. This figure indicates the enormous financial impact on the state of improper resource and environmental management. The total losses can be calculated in accordance with the guidelines for calculating pollution and/or environmental damage stipulated in Permen LH No. 7/2014. The value of the losses is divided into several parts, namely (1) direct use value, which is the loss of potential utilization of forest products, water resources, and legal mining materials; (2) indirect use value, including the loss of ecological functions such as climate regulation and water supply; and (3) intrinsic value, namely the value of the damaged environment, including biodiversity and ecosystems that cannot be directly assessed economically [9]. The calculation is carried out using methods such as the market price method, replacement cost method, and benefit transfer. This approach is in line with Principle 16 of the 1992 Rio Declaration (polluter pays principle), which requires perpetrators to pay all costs of verification, analysis, expert services, mitigation, and

restoration so that the environmental damage caused by PT Timah's illegal mining can be quantitatively proven and included in the state's losses to strengthen the basis for criminal and civil prosecution of the perpetrators [9]. This study provides a comprehensive analysis of the regulatory framework governing 2 the calculation of ecological value as a legal basis for determining actual state financial losses arising from corruption-related environmental damage. It examines the legal mechanisms for proving environmental damage and state financial losses, as well as the judicial reasoning underlying Harvey Moeis's sentencing, to assess the extent to which substantive justice has been realized for both the state and the damaged environment. Furthermore, this study compares the accountability reflected in the Harvey Moeis Verdict

https://doi.org/10.58421/misro.v4i4.884 1393 and the Nur Alam Verdict to explain sentencing disparities in corruption cases involving environmental harm. By doing so, this research fills a gap in legal scholarship by analyzing how 2 environmental damage in the Harvey Moeis case is legally classified and proven as state financial loss, and why environmental restoration instruments have not been consistently integrated into judicial reasoning and sentencing, despite the availability of an adequate regulatory framework. Accordingly, this study is guided by the following research questions: 1) What is the regulatory basis and legal mechanism for calculating environmental damage and proving state financial losses in the Harvey Moeis corruption case? 2) How do judicial considerations in determining liability and sentencing in corruption cases, causing environmental damage, including environmental restoration obligations, reflect substantive justice? 2. METHOD This study adopts a normative juridical approach, focusing on an in-depth analysis of legal norms, doctrines, and principles to clarify the issues being investigated. The method incorporates several approaches, namely the statutory, conceptual, case-based, and comparative approaches [10]. The sources of legal materials consist of primary legal materials 2 such as the Tipikor Law, PPLH Law, Permen LH No. 7/2014, PP No. 22/2021, and several court rulings, namely Putusan MK No. 25/PUU-

XIV/2016 and Putusan MA No. 2633 K/Pid.Sus/2018, Putusan Pengadilan Negeri No. 70/Pid.Sus-TPK/2024/PN JKT.PST. and Putusan Pengadilan Tinggi No.16/Pid.Sus-TPK/2018/PT.DKI. These verdicts were selected based on their relevance to corruption cases involving environmental damage and state loss calculations. The comparative approach is employed to analyze disparities in judicial reasoning and sentencing between the Harvey Moeis and Nur Alam cases. Secondary legal materials include relevant books, journals, and scientific articles. In addition, limited structured interviews were conducted with environmental law experts and legal practitioners. Within the normative juridical framework, these interviews function solely as supplementary secondary data to support and confirm normative interpretations, rather than as primary empirical evidence. [11]. Tertiary legal materials in the form of the KBBI (Indonesian Dictionary) and legal encyclopedias are used to provide additional explanations to other legal materials. Legal analysis was conducted using qualitative descriptive methods, including systematic interpretation of legal norms, mapping regulatory standards to evidentiary requirements for proving state financial loss, and comparing judicial considerations across cases. Disparity analysis is based on defined units of comparison, including the articles charged, the defendant's role and position, the amount of state loss, sentencing severity, compensation orders, and the presence or absence of environmental restoration obligations. [11].

https://doi.org/10.58421/misro.v4i4.884 3. RESULTS AND DISCUSSION

3.1. Regulations in Calculating Environmental Damage and Proving State Financial Losses in the Harvey Moeis Corruption Case The environmental damage resulting from the corruption case involving Harvey Moeis must be proven by the Public Prosecutor (JPU) as part of the element of state financial loss. In court proceedings, the Public Prosecutor is required to present at least two types of legally admissible evidence. One of the pieces of evidence submitted is an audit report on the calculation of state financial losses, which shows that environmental damage amounted to Rp271 trillion. This amount was calculated in accordance with guidelines issued by the Ministry of Environment, namely Permen LH

No. 7/2014. This regulation explains that environmental losses are calculated by assigning an economic value to the The impacts arising from environmental contamination or degradation. This value indicates the amount of economic loss that must be compensated by the party causing the damage to the aggrieved party. This calculation covers three aspects, consisting of ecological losses, economic losses, and environmental rehabilitation costs [9]. In accordance with the Tipikor Law, natural resources constitute an element of national financial assets, as their management and stewardship fall under the state's authority, so that abuse of authority resulting in a reduction in natural resources can be categorized as state losses. Following Putusan MK No. 25/PUU-XIV/2016, such losses must be real and qualified as actual losses if supported by scientific evidence, so that they can be recognized as 2 state financial losses [9]. To prove environmental losses as actual losses, refer to Permen LH No. 7/2014 concerning the scheme and method of calculating the value of environmental losses, which is explained in Figure 2 as follows:

https://doi.org/10.58421/misro.v4i4.884   Figure 2. Scheme of 2 Environmental Pollution and/or Damage and Methods for Calculating the Value of Losses Source: Permen LH No. 7/2014 concerning Environmental Losses Due to Pollution and/or Environmental Damage Figure 2 illustrates various types of losses resulting from pollution and/or environmental damage, along with the methods used to calculate them. These calculations can be considered as financial losses to the state, 1 as explained in Government Regulation No. 22 of 2021 concerning the Implementation of Environmental Protection and Management (PP No. 22/2021). Articles 410 to 412 stipulate the obligation of every person or business entity to control the pollution or environmental damage they cause, including hazardous waste management and disposal. If the perpetrator is unable or unwilling to take action, the central or regional government may take action in accordance with Articles 412 and 413. The costs incurred by the government are calculated as environmental losses under Article 414[12]. Articles 415 to 419 regulate 1 the mechanisms for reporting,

verifying, and restoring activities to address environmental pollution or damage. The forms of damage regulated in Article 414 include compensation for the costs of verifying complaints, inventorying environmental disputes, and environmental monitoring costs [12]. Furthermore, Articles 420 to 425 stipulate that environmental restoration shall be carried out through the stages of stopping the source of pollution, cleaning, remediation, rehabilitation, and restoration. If the perpetrator fails to fulfill the restoration obligation, the government may take over implementation at the perpetrator's expense, and these costs shall be treated as environmental damage. Meanwhile, Articles 426 to 434 explain the procedures for implementation, supervision, and community involvement in restoration activities [12]. Ecosystem damage is part of environmental damage, calculated based on the costs of restoring disrupted ecosystem functions. The components calculated include the cost of restoring water flow such as drainage, the cost of building reservoirs or water storage, the

https://doi.org/10.58421/misro.v4i4.884 1396 cost of water management such as irrigation, the cost of erosion and runoff control, costs of restoring lost or damaged soil layers, costs of recycling nutrients, costs of waste decomposition, costs of protecting or restoring various types of animals and plants, costs of genetic resources, costs of reducing carbon emissions released into the atmosphere such as deforestation, erosion costs, and biodiversity restoration costs [12]. Of these various components, the greatest losses are generally found in the costs of biodiversity restoration and biodiversity [13]. Ecology is the scientific field that examines the interconnected relationships among living organisms and their environments, with ecosystems as one of its central areas of study [14]. All of these provisions fall under the category of environmental damage because mitigation and restoration activities are financed by the state budget, regional budgets, environmental funds, and corporate social responsibility (CSR) funds, as provided in Articles 435–449 [12]. These types of losses can be calculated using the environmental damage calculation method contained in Permen LH No. 7/2014. Several methods can be used to assess

environmental damage. First, the pollution unit value accumulation method, which calculates the value of each waste parameter based on its environmental and health impacts, expressed in Pollution Units (UP). Second, the operational cost method, which compares waste treatment costs across similar industries based on the volume of waste treated and the level of efficiency. Third, the full cost principle method, which covers all cost elements, including investment, labor, energy, chemicals, maintenance, and depreciation of waste treatment facilities, both existing and newly built [15]. Furthermore, there is the concept of environmental economic valuation, which aims to assess the economic benefits (monetary value) of natural resources and the environment through multiple analytical or methodological perspectives, thereby enabling the true economic value to be measured to support sustainable natural resource management. The aim is to measure the extent of environmental benefits for humans so that they can be compared with other economic activities (willingness to pay). Through this valuation, ecological values such as the functions of forests, clean water, air, and biodiversity can be translated into monetary terms so that the results can be used as evidence in court [16]. The Effect on Production (EOP) method is used to calculate losses by assessing the decline in resource productivity due to environmental damage, such as a decline in agricultural and fishery yields or soil and water quality, which is measured using shadow prices. Meanwhile, the Contingent Valuation Method (CVM) serves to assess non-market environmental services through people's willingness to pay (WTP) or receive compensation (WTA) for changes in environmental quality. The combination of the EOP and CVM approaches enables environmental economic valuation to produce objective loss estimates, which may serve as a foundation for determining the extent of losses incurred by the state, restoration costs, and judicial considerations in cases involving environmental damage. In addition, there are several approaches and methods used in the concept of environmental economic valuation, as listed in Table 1 below:

Environmental Economic Valuation Approach Method Description Market-based approach Market price Assessing the economic value of the environment based on actual market prices. Productivity method Measuring the contribution of the environment to the production output of an economic activity. Damage cost avoided/ replacement cost Calculating the costs required to repair or replace environmental damage. Shadow project Comparing with the cost of constructing an artificial project that has a similar function to the natural environment. Opportunity cost Assessing the best alternative value sacrificed as a result of utilizing certain resources. Non-market approaches Hedonic pricing method (HPM) Assessing the impact of environmental quality on property prices. Travel cost method (TCM) Estimating the economic value of a tourist destination based on the travel costs incurred by visitors. Contingent Valuation Method (CVM) Measuring people's Willingness to Pay (WTP) or accept compensation (Willingness to Accept/WTA) for changes in environmental quality. Contingent choice method (CCM) Asking parties to choose between several scenarios of different environmental conditions. Benefit transfer method Using economic valuation results from research in other locations with similar characteristics. Source: Hajawa, H. (2018). Pengembangan Hutan Kota Berbasis Valuasi Ekonomi (Studi Kasus Kota Makassar). Disertasi Doktor, Universitas Hasanuddin. Table 1 shows two methods of environmental economic valuation, namely marketbased and non-market-based, which must be calculated by experts in accordance with the provisions of Articles 4 to 6 of Permen LH No. 7/2014. Experts appointed by the competent authorities must use official guidelines, and the results of their assessments form the basis for the resolution of environmental disputes through both litigation and non-litigation channels [17]. This valuation concept is relevant for explaining the scale of ecological damage in Bangka Belitung, an archipelago covering 8.17 million hectares that faces heavy pressure from tin mining. In the period from 2015 to 2021, this region lost 30,594 hectares of forest cover and, in 2022, experienced an increase in critical land to 167,065 hectares. This damage also affected 433 watersheds, with 202 of them directly impacted, causing pollution, siltation, and loss of water sources. In addition, the existence

of 12,607 unreclaimed pits with a total area of 15,579.747 hectares creates a high safety risk and has caused fatalities, especially among children [8]. The concept of environmental economic valuation quantifies the magnitude of environmental benefits to humans and their relationship to economic activities, enabling damage to be translated into tangible losses. In the context of Bangka Belitung, habitat destruction that triggers animal conflicts and marginalizes indigenous groups and vulnerable communities demonstrates the loss of ecosystem services that previously supported their livelihoods. The climate crisis exacerbates these impacts, with more than 926,000 fishermen and farmers potentially losing their livelihoods, small islands threatened with submersion due to abrasion and tidal flooding, agricultural productivity declining due to the loss of fertile soil, declining water quality, increased risk of disasters, declining biodiversity, and loss of

https://doi.org/10.58421/misro.v4i4.884 vegetation, thereby damaging the microclimate and reducing carbon sequestration. All of these conditions show that the ecological damage in Bangka Belitung has not only had a physical impact but has also seriously eroded the community's social, economic, and health resilience [8]. After environmental losses are calculated, the next step is to prove them in court. Indonesia applies a negative legal system of evidence [18], which requires combining at least two pieces of valid evidence and the judge's conviction, in accordance with Articles 183 and 184 of the KUHAP [19]. The evidentiary materials comprise witness statements, expert testimonies, documentary evidence, circumstantial evidence, and the defendant’s statement. Witness testimony is based on what they have seen, heard, or experienced themselves, while individuals with specific expertise provide expert testimony. Documentary evidence includes official documents, letters from authorized officials, or expert statements, while circumstantial evidence comes from actions or circumstances that indicate the occurrence of a criminal act. Defendant testimony is a statement regarding acts committed or experienced firsthand [20]. In environmental cases, based on Article 96 letter f of the PPLH Law and Keputusan MA No. 36/KMA/SK/II/2013, the results of

environmental damage assessments include other evidence, such as electronic data, satellite imagery, hotspot maps, and other scientific analyses that can strengthen the judge's conviction regarding the material truth of the case [21]. During the evidentiary process in Harvey Moeis's court verdict, the public prosecutor presented various technical documents that showed actual environmental damage, ranging from field observations to laboratory analyses that revealed the loss of vegetation, soil layers (solum), and the formation of excavation pits in the mining area. Maps and satellite imagery from 2015 to 2022 show changes in the landscape, the expansion of voids, and the location of excavations inside and outside forest areas, including unlicensed areas. Soil analysis by the ICBB Laboratory confirmed that the land conditions met the standard criteria for damage, as per Kepmen LH No. Kep-43/MENLH/10/1996 and PP No. 150/2000, particularly in terms of pH, clay fraction, sand fraction, and redox parameters. This evidence is reinforced by experts from the Ministry of Environment and Forestry and environmental valuation experts Prof. Dr. Ir. Bambang Hero Saharjo, M.Agr., Prof. Dr. Ir. Basuki Wasis, M.Si., and Wardana, S.E., through field verification, direct measurements, and the preparation of reports on ecological losses, environmental economics, and restoration costs in accordance with Permen LH No. 7/2014. BPKP Document Number PE.03.03/SR522/D5/03/2024 concerning state losses due to environmental damage and evidence of reclamation obligation violations also supports the overall calculation. Regulations such as Permen LH No. 7/2014, PP No. 150/2000, and Permen ESDM No. 11/2018 were used as the normative basis for the calculation, so that all the evidence formed a systematic series to show the extent of ecological damage and its impact on state finances [8]. The panel of judges in Harvey Moeis's court verdict stated that the element of unlawfulness in Article 2 paragraph (1) of the Tipikor Law was fulfilled because Harvey Moeis and PT Timah carried out illegal mining activities that were contrary to environmental protection and management regulations. These activities were carried out without fulfilling environmental obligations, including obligations to prevent damage, control pollution, and

https://doi.org/10.58421/misro.v4i4.884 1399 undertake reclamation, resulting in ecological damage as evidenced by satellite imagery analysis, soil testing, and expert testimony. These actions not only damaged land, water, ecosystems, and forest cover, but also caused state losses, calculated using official guidelines from BPKP to value ecological damage, environmental economic losses, and restoration costs. Based on all of this evidence, the judge ruled that Harvey Moeis' actions constituted unlawful acts that caused financial losses 2 to the state as referred to in Article 2 of the Tipikor Law. However, Indonesia regulations still indicate that the Tipikor Law and the PPLH Law have not yet been integrated, so harmonization is needed to include environmental damage in corruption-related criminal charges clearly. This integration is important so that prosecutors can use environmental damage audit reports not only as evidence but also as a basis for indictments, thereby providing judges with a strong legal basis for imposing environmental restoration costs as a form of accountability for perpetrators of ecological and social damage. In Harvey Moes's court verdict, the aspect of criminal punishment for perpetrators as environmental polluters 1 has not been applied, so that ecological restoration has not been fully considered by judges, indicating the need to integrate the two regulations, so that ensuring that corruption cases with environmental ramifications are addressed in a holistic manner and can deliver substantive justice 2 for the state, the public, and the environment. 3.2. Judicial Considerations in Determining Liability for Corruption Crimes that Cause Environmental Damage from a Substantive Justice Perspective Criminal acts of corruption that caused ecological damage occurred in Southeast Sulawesi in a case involving Nur Alam, the governor from 2008 to 2014. In handling this case, the judges differed in their considerations when handing down their verdicts. Therefore, this discussion will examine the disparity in sentencing between 3 the Nur Alam Verdict and the Harvey Moeis Verdict. For ease of discussion, these two verdicts will hereinafter be referred to as the Nur Alam Verdict and the Harvey Moeis Verdict. Criminal disparity is the difference in sentencing between perpetrators 2 of criminal acts who have similar levels

of guilt and similar characteristics of their actions, without any objective or rational basis. This phenomenon arises because Indonesia judges have discretion to interpret legal facts and apply legal norms grounded in the principles of fairness, legal certainty, and legal benefit. Although this freedom is guaranteed by law, differences in judges' abilities, perspectives, and ideological bases regarding punishment philosophy often lead to variations in decisions across similar cases [22]. In addition, structural factors such as inconsistent legislation and the absence of uniform sentencing guidelines, as well as personal factors such as judges' social backgrounds, mentalities, and experiences, increase the potential for disparities. Thus, criminal disparities do not solely indicate judicial error, but rather reflect the suboptimal nature of the Indonesian sentencing system in achieving proportional and consistent justice [23]. Types of sentencing disparities include disparities for the same criminal offense, disparities for criminal offenses of the same severity, disparities decided by one panel of

https://doi.org/10.58421/misro.v4i4.884 1400 judges for the same case, and disparities decided by different panels of judges for similar criminal offenses [23]. Based on this classification, the cases of Nur Alam and Harvey Moeis fall under the category of sentencing disparities arising from different panels of judges sentencing for similar crimes. Both cases involve criminal acts of corruption in the mining sector that caused financial losses to the state and environmental damage, but were sentenced to different levels of severity. It is therefore necessary to explore in greater depth the distinctions in the judges' reasoning in both cases to identify the elements that contribute to the disparity in the decisions and to support the pursuit of substantive justice. In the Harvey Moeis ruling, the panel of judges stated that Article 2, paragraph (1)span class='highlighted color-3'>an> of The Tipikor Law had been fulfilled. The elements are that every person unlawfully commits an act of enriching themselves, others, or a corporation, which can harm state finances or the state economy [24]. The panel of judges considered the element of any person, based on the 2004 Supreme Court of the Republic of Indonesia Book II

Guidelines for the Implementation of Judicial Duties and Administration and Putusan MA No. 1398 K/Pid/1994, referring to legal subjects who can be held criminally liable, both individuals and corporations, according to the provisions of Article 1 paragraph 3 of The Tipikor Law. This interpretation indicates that every person is anyone who commits the alleged act and is legally capable of being held accountable for it. During the trial, Harvey Moeis confirmed his identity as stated in the indictment and provided clear answers, leading the panel to conclude that this element had been satisfied in his case [7]. The Panel of Judges assessed the element of unlawfulness by referring to the provisions of the Tipikor Law, Putusan MK No. 003/PUU-IV/2006, and Supreme Court Judicial Practice No. 2065 K/Pid/2006. Within this framework, this element is understood as an act contrary to written rules, official authority, and proper mining governance. The facts of the trial showed manipulation in PT Timah's operations, the purchase of tin ore from illegal mining, the creation of hundreds of limited liability entities to conceal the provenance of the goods, and the issuance of work orders used as a means of administrative legality without any actual activity. The program to increase processing residues and the program to increase production through a "jemput bola" system further reinforced this pattern. The Jemput-Bola system in this case meant that PT Timah did not wait for supplies to arrive through official channels; instead, it went to illegal mining sites to purchase tin ore directly, without laboratory testing, technical verification, or a valid legal basis. This method of operation violates mining procedures and demonstrates a series of actions that deviate from formal law [7]. Harvey Moeis's role was evident in the arrangement of transactions originating from these illegal practices. He knew that the tin ore was obtained from illegal sources, established relationships with parties operating mines without permits, and arranged the flow of funds using a mechanism referred to as corporate social responsibility activities, even though the funds came from the purchase of tin ore in violation of regulations. His actions benefited himself and certain parties, and contributed to environmental damage caused by unlicensed mining. Based on all these facts, the Panel of Judges found that Harvey Moeis' actions fulfilled the elements of unlawfulness.

https://doi.org/10.58421/misro.v4i4.884 1401 The Panel of Judges understands the element of enriching oneself, others, or a corporation as an alternative element that the existence of benefits can sufficiently prove to one of the parties. The panel found a real increase in wealth for various individuals and companies resulting from a series of actions involving Harvey Moeis in the management of tin commodities in the mining business license area of PT Timah from 2015 to 2022. This increase can be seen in the large amounts received by a number of parties, such as Suparta through PT RBT, Tamron through CV VIP, Robert Indarto through PT SB, Suwito Gunawan through PT SIP, and Hendry Lie through PT TI, as well as hundreds of mining service partner companies that recorded large profits. In addition, approximately 420 billion rupiah in corporate social responsibility funds were collected through PT Quantum Skyline Exchange, but there is no record of their use. All of these cash flows and increases in wealth indicate profits derived from illegal activities, leading the Panel of Judges to conclude that the element of enriching oneself, others, or corporations has been proven [7]. The Panel of Judges understands the element of financial loss to the state or the state economy as an alternative element that can be sufficiently proven by the existence of actual losses, in line with Putusan MK 25/PUU-XIV/2016, which emphasizes that state losses in Article 2 paragraph (1) and Article 3 of The Tipikor Law must be actual losses, not estimates. Loss is defined as a reduction in state assets, including those under the control of state-owned enterprises or companies operating based on state capital participation. An audit by the BPKP showed that the losses reached Rp300,003,263,938,131.14. This figure came from three main sources: the leasing of tin processing equipment that did not comply with regulations, payments for tin ore from illegal mining, and environmental damage caused by unlicensed mining activities. These losses consist of more than two trillion rupiah from equipment rental agreements, more than twenty-six trillion rupiah from the purchase of illegal tin ore, and more than two hundred and seventy trillion rupiah from environmental damage. The valuation issued by the competent authority served as the basis for the

panel's conclusion that the element of state financial loss had been established [7]. The panel of judges declared that all elements of Article 2 paragraph (1) of the Tipikor Law had been proven, thereby finding Harvey Moeis legally and convincingly guilty of corruption and sentencing him to 6 years and 6 months in prison and a fine of 1 billion rupiah, with the provision that six months' imprisonment would replace the fine if it were not paid. The panel also ordered Harvey to pay compensation of 210 billion rupiah. If this is not paid within one month of the verdict becoming final, the prosecutor will seize and auction his assets. If his assets are insufficient, this obligation will be replaced with a prison sentence of two years. In the Nur Alam ruling, the High Court Judges stated that Article 3 of the Corruption Eradication Law had been fulfilled. These elements include abuse of authority, benefiting oneself, others, or a corporation, and causing damage to state finances or the state economy. The panel of judges considered that the element of abuse of authority had been fulfilled because Nur Alam, in his capacity as Governor of Southeast Sulawesi, issued various mining permit documents to PT Anugerah Harisma Barakah (AHB). These ranged from area reservations and exploration mining permits to upgrades to the production stage without complying with the law. The permits were issued without the necessary technical

https://doi.org/10.58421/misro.v4i4.884 1402 recommendations, violating the provisions of Article 37 letter b concerning the procedures for granting mining permits and mining area provisions, Article 39 paragraph (1) concerning the requirements for granting IUPs, and Article 51 of the Minerba Law concerning the government's obligations in regulating and supervising mining, and Article 38 paragraph (3) of the Forestry Law regarding IUPs issued within forest areas must first obtain permission from the Ministry of Forestry and use documents with backdated dates to cover up procedural irregularities. This method of operation demonstrates the exercise of authority beyond legal limits and contradicts the principles of good governance, thereby establishing the first element of Article 3 of the Tipikor Law [25]. The panel of judges considered the element of benefiting

oneself, others, or a corporation, namely, from the examination of cash flows and the results of the BPKP audit. Nur Alam was recorded as receiving personal benefits amounting to Rp2,781,000,000.00, which were given through an intermediary after nickel mining and sales activities were underway. In addition to this personal benefit, the abuse of authority in issuing mining permits also benefited PT Billy Indonesia to a much greater extent, amounting to approximately Rp1,593,604,454,137.00, as the company gained mining access and economic benefits from permits issued unlawfully [25]. The elements of state financial loss and national economic loss are deemed fulfilled because all loss calculations presented during the trial were supported by the expert testimony of Dr. Ir. Basuki Wasis, M.Si., from the Faculty of Forestry at IPB, who stated that the environmental damage amounted to approximately IDR 2,7 trillion. The loss to state finances reached IDR 1,59 trillion. Mining activities carried out under illegally issued permits caused significant losses, both fiscal and ecological. The results of the BPKP audit showed that the state suffered losses of more than one trillion rupiah due to the exploitation of mining areas that did not comply with regulations. At the same time, the environmental damage that must be restored exceeded two trillion rupiah, including ecological damage, environmental economic losses, and the cost of rehabilitating the mining area. Expert calculations confirm that these losses are real and measurable. With the fulfillment of the elements of state losses, abuse of authority, and benefits enjoyed by certain parties, the Council concluded that all elements of Article 3 in conjunction with Article 18 of the Tipikor Law were proven in Nur Alam's actions [7]. The panel of judges declared that all elements of Article 3 of the Tipikor Law had been proven, thereby finding Nur Alam legally and convincingly guilty of corruption and sentencing him to 15 years in prison and a fine of 1 billion rupiah, with the provision that if paid, it would be replaced with 6 months' imprisonment, payment of compensation amounting to Rp 2,781,000,000.00, revoking his political rights for 5 years after Nur Alam has completed his sentence [7]. The disparity in sentencing between Harvey Moeis and Nur Alam shows a striking difference in treatment, even though both were proven to have committed corruption that caused losses to the state. Harvey

Moeis was sentenced to 6 years and 6 months, which is much lighter than Nur Alam's 15 years, even though Harvey's losses reached around Rp300 trillion, far exceeding Nur Alam's Rp4.29 trillion, including environmental damage. This difference is likely influenced by position, abuse of authority, level of subjective fault, and

https://doi.org/10.58421/misro.v4i4.884 the perpetrator's motive [23]. From a substantive justice perspective, this raises questions: the material and ecological losses caused by Harvey Moeis' actions were greater, yet the verdict against Nur Alam was heavier because the abuse of public authority as governor was considered more serious ethically and legally. This case shows that sentencing in Indonesia sometimes emphasizes positional status and political impact more than the actual amount of loss. This leads to discrepancies in the legal treatment of corruption offenders who cause considerable economic damage but occupy different levels of authority. Although both rulings acknowledge that ecological losses can be calculated as part of the state's financial losses and have a direct impact on the economy, the application of substantive justice in practice remains suboptimal. The rulings have not comprehensively ordered environmental restoration and proportional compensation for affected ecosystems and communities, and the compensation awarded remains far below the actual value of the losses. This shows that, even though corruption has been proven and sanctions have been imposed, the rulings do not yet fully reflect comprehensive substantive justice, underscoring the need for consistent and fair law enforcement, both in restoring state financial losses and safeguarding the rights of impacted communities and the environment. 4. CONCLUSION The discussion demonstrates that environmental destruction resulting from corruption in the natural resource sector directly diminishes the state’s economic value, thereby justifying the inclusion of environmental damage assessment as an integral component of state financial losses. From a regulatory perspective, the fulfillment of state financial loss elements is supported by the Environmental Protection and Management Law (PPLH Law), Ministry of Environment Regulation No. 7 of 2014, and Government Regulation No.

22 of 2021. These instruments regulate environmental loss calculations through the accumulation of pollution unit values, operational cost methods, and the full cost principle, complemented by 25 environmental economic valuation using market and nonmarket approaches. With regard to proof and evidence, once environmental losses are calculated by a duly appointed expert in accordance with the prescribed regulatory framework, such losses may be legally proven in court as constituting actual state financial losses, as reflected in the Harvey Moeis corruption case. This confirms that environmental damage can satisfy the evidentiary requirements 2 of state financial loss within corruption prosecutions. 1 In terms of sentencing disparity, a comparative analysis of the Harvey Moeis and Nur Alam verdicts reveals differences in judicial considerations, particularly concerning the length of imprisonment, fines, compensation orders, asset forfeiture, and the imposition of ancillary sanctions. 3 In the Nur Alam case, the court additionally imposed a five-year revocation of political rights. These disparities are attributable to differences in the defendants' positions, degree of culpability, and the quantified amount of losses. However, from the perspective of substantive justice, neither decision fully achieves restorative outcomes. Although environmental damage was acknowledged and the elements 2 of state financial loss were deemed satisfied, the courts did not impose obligations for environmental rehabilitation or compensation for affected communities. This indicates a structural gap in

 sentencing practice, highlighting 1 the need to integrate mandatory environmental restoration measures into corruption adjudication to ensure substantive justice for both the state and the environment.

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