Accessibility and Reliability of Expert Evidence in Civil Environmental Cases in Indonesia and Netherland: A Preliminary Survey

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***Abstract*— Expert evidence has a role in assisting the court to understand the scientific aspect of environmental cases. This paper describes as a preliminary survey on the existing rules and judicial practice on expert evidence in Indonesia and Netherland from the perspective of accessibility and reliability. Accessibility issue connected with expert appointment, fees and immunity. While reliability issue related with the expert appointment, qualification, objectivity, impartiality and report quality. Both jurisdictions regulates expert evidence in its civil procedural law with different level of elaboration in term of expert appointment and its subsequent rules such as expert report, procedure for investigation, compensation and honorarium, impartiality and objectivity assurance which could predispose the court settlement of environmental cases in practice. For historical reason, the rule on court appointed expert and party expert in the Dutch civil procedural law and its development could be learned for future development of Indonesia civil procedural law and specific guideline such as for environmental cases in view of fairness in truth seeking in adjudication.**

***Keywords*—** expert evidence, civil procedure law, environment, accessibility, reliability

1. Introduction

Contribution of scientific evidence in the form of fact or opinion evidence [1] to help the court in finding the truth in environmental cases is important. Expert evidence as one means to transform scientific and other evidence wich need specialized knowledge has a role in assisting the court to understand environmental pollution and degradation incidents from the scientific aspect. The complexity of the causality relationship causes the role of an expert is unavoidable. Consequently [2], the presence of expert evidence in the proof process, a central and complex aspect of civil procedure law, is often significant.

The availability and development of certain science such as environmental forensics which could help determine those responsible for releasing pollutants into the environment, [3] and its capability to allow humans to provide proof to the certain degree of certainty, [4] could be seen as a society resources to assist the truth seeking process of adjudication.

However, accessibility of scientific evidence is still an obstacle for litigants, especially those the victims of environmental pollution or degradation. Nicholson implied how the complexities of the proofing process in environmental suits can result in prolonged and expensive legal proceedings with only a small chance of success. Victims of environmental pollution or damage, who in most cases originate from the socially and economically weak sectors of society, are rarely able to afford the expenses associated with such proceedings. [5] The difficulty of pollution victims to prove their case affects the success of the claim. [6] It illustrates how the opportunity of scientific evidence, including the expert evidence, in assisting the court to find the truth cannot effortlessly employed.

Another challenge with the presentation of scientific evidence in the judicial process is the question of the reliability of such evidence so it can have a value as legal evidence. Though the proof of a civil environmental case has used scientific evidence it does not necessarily result in a court ruling that grant the claim of the environmental pollution victim. [7] In a broad sense, legal practitioners need to understand the link between science and law in resolving environmental cases in the court. Judges, for instance, are required to be able to identify and analyze scientific evidence in environmental cases, such as research results, laboratory test results and expert evidence [8].

2. Expert Evidence

The process of finding the truth in the proofing process can lead to the manifestation of justice as an expected outcome of the judicial process and also perceived as the essence of the judicial process itself. [9] Rationalist theories of evidence and proof as depicted in William Twining model, among others based on the assumption of judgements about probabilities of common course of events have to be based on the available stock of knowledge which is largely a matter of common sense supplemented by specialized scientific or expert knowledge when it is available. Another assumption is the primary role of forensic science is to provide guidance about the reliability of different kinds of evidence and to develop methods and devices for increasing such reliability. [10] Thus, theoretically the reliable expert evidence has supplementary rules in order to achive the rectitude of decision in term of accurate determination of the true past facts process.

Expert evidence which mean evidence about a scientific, technical, professional, or other specialized issue given by a person qualified to testify because of familiarity with the subject or special training in the field also termed expert testimony. [11] Jasanoff distinguishes expertise in four category as expert-scientist, expert-practitioner, expert-professional and nonexpert [12].

Accessibility of expert evidence here links to the capability of the courts and litigants to obtain expert evidence and the capability of the experts to engage in the judicial process. Reliability of the expert evidence correlates to the ability of the expert evidence to be trusted or believed by the courts. Accessibility and reliability of expert evidence in line with the principle of "simple, fast, and low-cost" of the judicial power implementation in which examination and settlement of cases shall be carried out efficiently and effectively, within the costs that can be reached by the community "without overruling the accuracy and correctness" in seeking truth and justice [13]. This principle can be traced to the Jeremy Bentham work on judicial evidence which perceive "rectitude of decision" as direct objective and celerity, cheapness and freedom from unnecessary impediments as collateral objective [14].

Someone, including a judge, cannot be required to know everything. Therefore, the law provides the possibility for the judge to seek for expert opinion as a mean for judges to seek truth in order to be able to make a fair decision [15]. The judge must examine and decide the case submitted to him and shall not refuse the case submitted for examination. Not because he is considered an expert in every disputed case but because his duty to decide the case [16].

3. Method

This paper aims to describes as a result of preliminary legal survey about the existing rules on expert evidence pertinent in civil environmental cases with the accessibility and reliability perspective. The research investigates the legal materials in the form of regulations, court's decision, legal book, journal and other legally relevant materials on expert evidence in Indonesia and Netherland. The materials being analysed qualitatively with comparative perspective.

The result of the research presented in two section. The first part describes expert evidence in environmental cases in Indonesia which covers status of expert evidence, reasons and objectives of expert examination, experts appointment, expert qualification, form of submission of expert evidence, assessment of weight of expert evidence, conflicting expert opinion and expert immunity. The description of expert evidence in Netherland being elaborated in part two which to some extent covers the similar aspects with the Indonesian one. The comparative analysis presented in the third part before the conclusion.

4. Result

A. Equations INDONESIA

1) Indonesian Civil Procedure Law and Its Development

Civil Procedure Law has not yet been regulated in one act as it is still spread in various laws and regulations. The provision regarding expert evidence can be found in current Civil Procedure Regulations which consists of Het Herziene Indonesisch Reglement (HIR) [17] applicable for Jawa and Madura Island and Rechtsreglement Buitengewesten (RBg) [18] applicable for Indonesian region other than Jawa and Madura Island. Evidentiary provision can also be found in the Civil Code [19]. More detail provision regarding expert evidence can be found in the Reglement of de Rechtsvordering (Rv) [20] which is a civil procedural law that applies to 'Europeans' and 'East Foreigners' who were living in Indonesia during the colonial period but now are no longer valid as a formal legal source. However, in practice, some provisions in the Rv may still be useful for implementing some substantive laws in which the certain procedure have not been provided in HIR/RBg [21]. Relevant Rv provisions being quoted in this work for comparative purpose,

except those specifically acknowledge as applicable rules by the doctrine.

The process of civil procedure law unification has been started since about the 1960s. The government has now prepared an Academic Manuscript for the Civil Procedure Law Act (Academic Manuscript) [22] and the Draft Act on Civil Procedure Law (DACPL) [23]. According to the AM, the civil procedure law will be regulated in the form of comprehensive national codification and unification by referring to the development of provisions in addition to HIR, RBg and Rv as well as adaptive to the development of relevant international treaty provisions [24]. Provisions regarding expert evidence can be found in the DACPL which can be compared with the provision in HIR, RBg, and Rv.

As expert evidence began to play an important role in the practice of civil environmental cases and issues arise with it present, progress has been made in 2013 when Indonesian Supreme Court issued Guideline for Handling Environmental Cases (EG) [25]. The EG provides direction on the status of expert evidence, expert qualification, the appointment of the expert, cost of the expert appointment, different expert opinion and assessment of expert evidence.

2) Status of Expert Evidence

Evidence is the instruments used to prove the arguments of the parties before the court, both written and non-written evidence [26]. In article 164 HIR/284 RBg it is stated that evidence consists of written evidence, witness evidence, presumption, confession, and oath [27]. Written and witness evidence can be classified as direct evidence, whereas presumption is indirect evidence [28]. According to Subekti, the enumerative mention of evidence in article 164 HIR/284 RBg does not mean prohibiting other evidence [29]. In other provisions as well as in jurisprudence it is recognized that there is other evidence such as local examinations and expert evidence [30]. The acknowledgment of expert evidence specified separately in article 154 HIR/181 RBg.

The EG also mentions expert evidence as one type of evidences in civil environmental cases. Another evidence specifically mentions in the EG are witness testimony, letter or document, electronic evidence and other evidence including scientific evidence such as laboratory test result [31].

3) Experts Appointment

As stipulated in article 154 (1) HIR/181 (1) RBg, experts are appointed by the court. The appointment, both at the request of the litigant or by the judge ex officio. Based on this provision, the litigants can propose experts. Likewise, the judge ex officio can also appoint experts, although not proposed by the parties. Several possibilities of the expert appointment based on this provision are: expert appointed based on one party proposal, expert appointed based on both litigant's proposal or expert appointed by the judge ex-officio.

The idea of Article 154 is the presiding judge who appoints an expert. Nonetheless in the practice, the litigants brought their respective experts. One on the opinion that only the presiding judge who can propose the expert and the parties have no right to do so. Accordingly, the rule must be clarified and locked on the reason to accommodate the presence of neutral and more technical experts in accordance with the nature of the case being litigated. The other one on opinion that expert proposals must not be limited to the judges, because in principle the expert's information is not binding on the judge [32]. The two discrepancies of opinion which implicates the judicial practices indicates that rules on expert's appointment need to be clarified. In environmental cases, both type of appointment might be needed since the parties possibly will need early involvement of the expert to investigate the event.

The expert is appointed by the judge to be asked for his opinion and the appointment is valid during the examination [33]. In practice, an expert may not be able to express his opinion directly at the first session. In this case the expert may request time to submit a report in writing and the expert examination be continued at the next session [34].

It is not mandatory for the appointed expert to accept the appointment. Instead, the parties concerned or the judge ex officio could appoint another expert. However, an expert who has been sworn to give his opinion and does not fulfil his obligations can be punished for losses [35].

The EG provide direction for the judges to appoint an independent expert in which its cost determined based on the party's agreement [36]. In practice, experts are generally proposed by the plaintiff and the defendant. Though the regulation allows, it is difficult to find experts appointed by the judge ex officio. Independent expert appointed by the court to some extent can possibly address impartiality issues and encouraging more experts to present in the court.

For comparison, appointment of experts according to Rv requires an agreement between the parties. If the parties do not agree, the judge ex officio appoints an expert [37]. No provision about it in the HIR/RBg. The agreement of the parties could be related to the possibility of making a joint report from the court appointed experts and impartiality of the expert.

According to HIR/RBg, the expert fees is part of the case cost [38]. In practice, the expert is paid by the party who proposed them to give an opinion in court. Fees of the expert also link to the impartiality of the expert. When the expert is paid by the parties, rules to ensure that the expert provides an objective opinion and not influenced by the needs of the client is important. In this regard the expert bound

by his oath to give opinion according to his knowledge as well as possible.

Several rules may provide answer for expert cost related accessibility issue. When the environmental organization filed a lawsuit, they can include expert fees in the component of real cost [39]. While state officials and government employees who assigned to testify as an expert in the court are entitled to the honorarium. The host agency shall provide the honorarium if the inviting agency does not provide one [40]. Any person or group of people who are economically uncapable can request for an exemption of court fees to the court, including expert cost [41].

4) Expert Qualification

The definition of expert can't be found in the HIR/RBg. It briefly states that "person who should not be heard as witnesses may not be appointed as experts [42]."

According to the EG, a person who can be an expert in civil environmental cases must have disciplines relevant with the case which is proven through a minimum of master's degree or have public recognition as an expert. Another requirement is to have made a scientific paper or relevant scientific research and actively participate in the workshop or seminars listed in his curriculum vitae [43].

Calculation of environmental losses of non-private property shall be carried out by experts in environmental and or economic valuation. The expert is appointed by the official of the central or local environmental agency. The appointment is based on their experience and research [44]. The expert's calculation shall be used as an initial assessment for in court or out of court settlement of environmental disputes and variations may occur during the process [45].

Although there is a doctrine of jus curia novit which mean the judge is considered to know all the positive laws, no one is able to know all the applicable laws [46]. Therefore, even regarding the law, the judge can ask for the help of an expert. For example, to know the local customary law, adat leaders or tribal leaders can be heard as experts [47]. It is also common in the practice of environmental cases one or more environmental law expert also being heard to give expert opinion in the court other than technical experts.

No stipulation in existing law which required certain authorities in Indonesia to maintain list of judicial experts. Transparency and efficiency of justice as well as the quality of expert opinions among others would be well-served by such lists. Easily accessible list of experts which reflect their qualification would allow litigants and judges to easily find the most appropriate expert for a certain case [48]. Circular Letter 13/2008 of the Supreme Court calls on the court to examine cases related to press cases to seek information from the Press Council (PC) experts [49]. The PC then issued regulation 10/2009 which regulates the statement of the PC expert. The experts are those who have special expertise to provide information on behalf of the PC, which consist of members and former members of the PC, chairmen or members of the honorary council of the press organization, and those who are elected or officially appointed by the PC which have expert certificates issued by the PC [50].

Unlike the PC experts, no definite direction for environmental experts who are diversely could come from a university, research institutions, professional organization, center for environmental studies, laboratory, individual or others government or non-government institutions.

The rule on expert qualification shall be seen for their impartiality and credibility which could lead to the reliability of their opinion and accessibility need.

5) Submission of Expert Evidence

HIR/RBg also arranges briefly regarding the form of expert evidence (deskundigenbericht) in which the expert provides the report "both in written form or verbally" and confirms the report with an oath at the day determined by the court [51]. The function of the oath here is like the witness oath in which nothing but to guarantee the objectivity of his statement [52]. The oath statement for expert witnesses state the expert will give opinion about the questions according their knowledge as well as possible [53]. The oath could be categorized as promissory oath in which the expert gives statements or promises to provide correct information.

In practice, it is usually mentioned at the bottom part of the written report a statement that the contents of the report are made based on the official oath [54]. No rule regarding whether parties can exchange a written expert report prior to trial. In the arbitration process, for comparison, the arbitrator or the arbitral tribunal shall forward a copy of the expert witness statement to the parties so that it can be responded to in writing by the parties [55]. Normally in practice the experts present at the hearing must pass the examination on their qualifications and opinions by the judges and the parties [56].

RBg contains provisions concerning examination of the experts who reside outside the territory of the district court. In this case, then at the request of the head of the district court, the report is given by the public official and the oath is taken by the official whose territory is where the expert is residing. The minutes then immediately sent to the head of the court to be read before the court [57].

HIR and RBg do not regulate in detail about when the expert shall carry out the examination, research or observations. Such provision can be found in the Rv which give an authority to the court to stipulate

in the minutes of the oath regarding the place and time of the experts to begin the inspection and when they must submit their written statement to the court. This must be done by listening to the expert(s) and parties present at the hearing [58].

Joint appointment of the same expert and joint report of the expert also not regulated in HIR/RBg. Joint reports from experts were regulated in Rv. After the experts did a deliberation, they make a written report based on the most votes. If there are differences of opinion, different opinions can be included in the report without mentioning the experts who have certain opinions. Reports are dated and signed by all experts. If none of the experts can prepare the report, a report shall be made by the notary who joins the sign [59].

In certain situations, an expert report can be the place to transform other scientific evidence to the court process. This is specifically the case for expert report based on an examination, research, or observation carried out before the trial. According to the EG, other scientific evidence in environmental cases such as laboratory report and assessment of damages must be supported by the expert statement to make it as legal evidence [60]. However, it is not clear which expert is meant whether the partie's expert or the court-appointed expert.

No specific guideline on the formalities of written expert report especially those made based on the field examination, research or observation. Formalities of expert report produced by field examination once cause a problematic in the application of law in practice. In the Ministry of Environment vs PTMPL, the District Court in opinion that expert evidence must be taken in the legal procedure like in environmental criminal cases [61]. After appealed to the High Court which reiterates the District Court ruling, the Supreme Court annulled the District Court Judgement. The Supreme Court acknowledge the expert report made based on field examination without necessity to conform with the criminal procedure but delivered in the court hearing [62].

6) Assessment of Weight of Expert Evidence

According to the provisions of Article 154 (4) HIR, "A district court or judge is not obliged to follow the opinion of an expert if the opinion is contrary to his or her beliefs [63]. In other words, insofar as the law does not regulate otherwise, the judge is free to assess the weight of the expert's opinion. This is confirmed in Article 146 (4) of the DACPL which states "The assessment of the weight of the expert evidence is on the Judge's consideration."

The jurisprudence of the Supreme Court No.213.K/Sip/1955, dated 10 April 1957, states that the District Court and High Court judges have no obligation to hear an expert based on Article 138 (1) in conjunction with Article 164 HIR. The judge's sight in the hearing about the difference between two signatures can be used by the judge as his own knowledge in the effort to prove it.

Two opinions regarding the weight of proof of expert opinion in relation to other evidence. First, expert opinion cannot stand alone, and its function and quality only add to other evidence [64]. Second, expert opinion can stand alone. In practice, according to Wirjono Prodjodikoro, information from an expert often really proves something, for example about why someone died [65]. Likewise, Sudikno Mertokusumostated that if with one evidence the judge obtained certainty and confidence regarding the truth of the event, it is adequate for the judge to state that the event had occurred. This is related to the nature of the purpose of proof to provide certainty to the judge about the truth of the event [66]. Abdulkadir Muhammad expressed if the panel of judges decides on a case based on the statement of an expert, the expert's statement is as weighty as proof of the witness [67].

A jurisprudence on the weight of expert evidence showed by the Surabaya District Court ruling No. 281/67 dated 27 May 1967. The court passed a ruling at the request of a widow who wanted to remarry before the 300 days waiting period expired. The court construct its judgment based on an obstetrician statement, whether the woman was pregnant or not. By disregarding the matters referred to in the valid law and with referring to the obstetrician certificate, the court believes it has adequate reason to grant the request of the applicant. As the panel of judges has based its provisions on the statement of an expert, it can be concluded that the expert's statement has the weight of evidence comparable to other evidence regulated by law, such as witnesses [68].

Another case is concerning hotel construction in Malang in 2013. The Malang District Court judges took over the opinion of the expert, a hydrologist, and take it in the consideration of the verdict. Quoting the opinion of the hydrologist, the panel of judges stated that the reduction of water discharge at the spring is not only due to the construction of the hotel, but hotel construction will increase the impact on the environmental load. By also consider the precautionary principle to minimize or avoid threats to the damage of the water springs, the court in opinion that the claim for the termination of hotel construction activities is legally sound and merits to be granted [69].

In another case concerning water pollution, Tanjung Pinang District Court acknowledged evidence from an expert witness who work as a staff at the Marine Farming Center of the Directorate General of Aquaculture. The expert provides his opinion by examining the reports of two laboratory test results from two different times. According to the expert, the water condition as shown by certain parameter in the laboratory test

result could interfere the life continuity of organism in the water [70]. The judge acknowledges the expert evidence in relation to other evidence, laboratory test result, presented by the plaintiff. The expert statement, together with witness's testimony, photograph and laboratory test result, contributes to the judge conclusion regarding causality between the act of the defendant and the loss suffered by the plaintiff.

From the above elaboration, it can be learned that an expert opinion or statement may have its own weight of proof, even a perfect weight of proof, when the judge obtained certainty and confidence regarding the truth of the event. In different case, to add value to its weight, expert evidence can be strengthened by other evidence. However, it depends largely on the specific situations of the case. In this regard, the judge has the autonomy to evaluate the weight of expert evidence. How the judge weight an expert evidence to some extent relates with how the expert make a statement or conclusion to certain fact based on his expertise.

The proof is about convincing the judges about the truth of an argument or arguments presented in a dispute [71]. According to Sudikno Mertokusumo the purpose of proof in civil procedure law is to achieve formal truth (formeel waarheid) which means that the judge may not exceed the limits proposed by the litigant parties which reflect the extent of the examination by the judge. Formal truth does not mean half-truth or false truth. In seeking formal truth, a civil judge is enough to prove with a "preponderance of evidence" [72]. Preponderance of probabilities or in another term the balance of probabilities is the normal standard of proof in civil cases in the common law legal system [73].

Chief of Supreme Court Decree 26/2013 [74] provide direction for the environmental judges to have competency on the scientific method to make them capable to identify and analyze scientific evidence including expert opinions. Competency on scientific method includes the ability to distinguish scientific from non-scientific methods, techniques and procedures and the exactitude and accuracy of recognizing scientific corroboration steps. Environmental judges are expected to possess the capability to assess the validity and legitimacy of scientific evidence which includes expert evidence.

7) Conflicting Expert Opinion

If there are two different expert statements in a case, the EG [75] provide that the judge can: (1) choose information based on the judge's conviction by giving reasons for choosing the evidence presented by the expert's statement, (2) present other experts by charging fees based on the agreement of the parties, (3) apply the precautionary principle. The EG stated that if there is a difference in the expert opinion and the judge are not yet convinced or in case the defendant and the plaintiff do not submit an expert, the judge may appoint another expert who is considered neutral. In the event that the judge appoints another expert, the judge may determine the party that must bear the costs of the expert [76].

In the Ministry of Environment and Forestry vs PTMPL [77], the Supreme Court perceives the situation where there are conflicting differences from the evidence, witnesses and experts proposed by the plaintiff and the defendant which lead to different conclusions about whether environmental damage had occurred or not as the condition of scientific uncertainty. In such situation, according to the Supreme Court, judges must apply the precautionary principle as stated in EPMA [78] and Rio Declaration [79]. Accordingly, scientific uncertainty shall not be used as a reason for postponing measures to prevent environmental degradation. While Rio Declaration specifically saying "threat of serious or irreversible damage" and "cost-effective measures" which are not expressed in the EPMA notion, the later specifically stating "measures to minimize threats." Both of them are precautionary principle in a broad sense in which the Supreme Court already acknowledge its applicability in the civil environmental cases.

8) Expert Immunity

Expert immunity problem arises related to the role of experts in environmental civil cases. Recently, a company sued an expert on the ground that the defendant committed an unlawful act related to the defendant statement as an expert in the forest fire case which was examined in another court where the company become the defendant. The company argues the results of laboratory testing and the letter regarding environmental destruction signed by the expert is legally flawed and has no evidentiary power. The company's lawsuit ended with a mediation agreement [80]. In another case, the same company also sued other experts with the same argument. The lawsuit ended with the revocation of the claim by the company [81].

While no specific provision on the expert immunity, according to the provisions of Article 154 (4) HIR/181 (5) RBg, a district court or judge is not obliged to follow the opinion of an expert if the opinion is contrary to his or her beliefs. Referring to this provision, the judge is not bound by the statement of an expert. Judges have the freedom to use or not to use the opinion according to the basis of their beliefs.

The issue of expert immunity is related to the possibility of discouraging the experts to help the court and the need for experts to be reliable in expressing their opinions. In this case, we can compare to the provision regarding immunity for advocates [82], environmentalist, [83] witnesses, victims, perpetrator witnesses and reporters [84]. In

the Advocate Act and the Protection of Witnesses and Victims Act, good faith is a measure for the immunity of advocates, witnesses, victims, perpetrator witnesses, and reporters [85]. Not different with other parties involved in the court process, the judicial experts also need independence in expressing their best knowledge in good faith, free from fear. Article 66 of EPMA which provides that "every person who fights for the right to a good and healthy environment cannot be prosecuted in the criminal or civil trials" to some extent also relevant with the expert who participates in the environmental civil lawsuits. This can be understood connecting to the purpose of environmental civil lawsuits to defend the rights to a healthy and decent environment [86].

B. NETHERLAND

1) Dutch Civil Procedure Law and Its Development

The Dutch legal system, as describe by Hooijdonk and Eijsvoogel, is a civil law system with the main source of formal law being codified legislation. Court decisions are also an important source of law. However, the Dutch law is not based on a system of binding precedent. The case law can also be used as an argument in a case. Likewise international treaties such as European Union (EU) regulations also become an important source of law where national law must be interpreted in accordance with EU legal principles [87].

Professor van Rhee describes how the Dutch Code of Civil Procedure (Wetboek van Burgerlijke Rechtsvordering or shortened as BRv) was introduced in 1838. It replaces the French Code de procedure civile 1806 which become the Dutch law in 1811 since the country being occupied by the French and remained took effect after the country became independent in 1813 [88]. Reglement op de Burgerlijke Rechtsvordering or often referred to as Rv which applies to Europeans in the Dutch East Indies was strongly influenced by Netherlands BRv 1838 [89]. Since the 19th century, legal experts and legislative institutions in Netherlands also consistently pay attention to the developments in other countries. Since the end of the 20th century, amendments have been made to BRv which are often in line with what can be observed in other European countries [90]. BRv has been amended several times throughout the twentieth century, but fundamental reform took place on January 1, 2002 [91].

BRv adopt an open evidence system which allows evidence to be given by all means, unless the law stipulate otherwise [92]. Professor C.H. van Rhee explains, in many cases there are no restrictions on evidence. BRv is not recognize numerus clausus which enumeratively mentioning the evidence. Written evidence, witnesses, expert statements, and local examination specifically being stipulated in BRv, while presumption is not specifically specified [93]. Expert evidence (deskundigen) is regulated in Article 194-200 and also Article 202-207 of BRv.

2) Court Appointed Experts

The court may order an expert report or examination at a court hearing at the request of the litigant or ex officio. The verdict states the points that require the opinion of experts [94]. Expert reports, according to van Rhee, were only ordered if the evidence by witnesses did not seem possible. This happens especially in technical cases such as to see the proportion of mineral content in certain food additives. There is no limit for the court in appointing experts, for example for cases involving the public interest [95]. In a condition where some of the relevant facts asserted by the parties and disputed by the others then to find out the truth the judge made an interim decision for corroboration by examination of one or more experts or do a site inspection [96].

According to van Rhee, there is no limit on the number of experts which could be appointed by the court. The judges appoints one or more experts through a decision or subsequent decision after consultation with the parties, with an instructions to deliver information in writing or verbally to him. If the parties agree on the expert, the court usually follows the parties' choice. If there is no agreement, the expert is chosen from the list of experts managed by the court [97]. No appeal is possible on this decision [98]. The registrar sends a copy of this appointment to the expert [99].

There is no requirement for an expert to accept the appointment [100]. If an expert does not accept the appointment or is unable to carry out his duties properly or is reluctant to do so, the court may appoint other experts ex officio or at the request of the eligible party [101]. At the request of a party or ex officio, the court may order the experts to provide additional explanations orally or in writing or to appoint one or more other experts after consultation with the parties [102].

3) Expert Costs

Whether the expert appointed by the judges ex officio or at the request of one or more parties, the judge may ask the experts to estimate their cost. Generally the plaintiff must deposit the money in advance with the amount determined by the court [103]. In certain cases which are usually related to the burden of proof, the court may stipulate the obligation to pay an advance to the plaintiff or to both parties [104]. At the end, the party who must pay the expert is determined by the final result of the lawsuit. The general rule is that the defeated party also pays the costs of their opponents' cases, including expert fees [105].

The obligation to deposit advances is not imposed on certain parties according to the Legal Aid Act or Civil Rights Act or other parties who are not required to pay court costs [106]. According to the

Legal Aid Act, a person or legal entity who meets certain criteria based on the proportion of their monthly income can obtain legal assistance [107].

Article 199 (1) BRv confirms experts are entitled to receive compensation and honorarium the amount of which is determined by the court. The court clerk pays compensation and honorarium to the expert from the advance which has been paid. If the advance is not sufficient, the court order the payment for the remaining amount to the obliged party to pay the cash advance fee of expert examination [108]. In the event that payments to the experts cannot be made because of the provisions which apply to parties who are not required to pay court costs, payments to experts are made from the government budget [109].

Broek and Enneking describes the costs in litigation, including expert fees, are seen by a writer as one of the obstacles in public interest litigation in Netherlands. The inability to finance experts in court, for example in the case of air pollution in the city of Utrecht, even led to the cessation of legal efforts by those who filed a lawsuit for the benefit of the environment. The rule that the defeated party must bear the litigation costs of the winning party, including expert fees, is considered to be a problem [110].

4) Expert Investigation

If experts are required to carry out an investigation, the court determines at the time of their appointment or afterwards concerning when and where they conduct the investigation [111]. In its decision, the court must also determine the time period when the experts must submit their written report to the court or the trial session where they must submit an oral report. In a case of a report submitted in writing, time is also determined for the next process. In the case of reports submitted verbally the subsequent time is determined at the session where the report must be delivered [112]. If the experts information could not be delivered until the day specified, the court may set a later time at the request of the parties or one party. Further session can also be specified if the oral report not be submitted to the session of the trial which has been determined [113].

The experts must carry out their duties impartially "to the best of their knowledge" [114]. According to the Practice Direction this is intended so the expert reports can provide independent and objective input without bias in matters relating to their expertise to the court. Before accepting his assignment the expert must verify his relationship with the litigants. "To the best of their knowledge" means the expert is expected to carry out examinations and submit reports according to his expertise, taking into account the rules, standards and conducts applicable to their profession [115]. No regulation regarding expert oaths in Dutch civil procedural law [116].

Based on the principle of audi alteram partem or equality of arms the experts must provide the opportunity for the parties to send and requests comments in their investigation [117]. The experts conduct their investigations under the guidance of the judges or independently. Written experts reports must indicate whether these requirements have been met. The contents of the comments and requests shall also mentioned in the written report. If a party submit a comment or a written request to the experts, he should immediately give a copy to the other side [118]. The parties must cooperate in the experts investigation. If this is not fulfilled, the court can draw appropriate conclusions [119]. In other words, the parties are in an equal position to provide and receive information between themselves and the experts [120]. If the expert does not allow both parties the same opportunity in his investigation, the report cannot and will not be used by the judge [121].

5) Written or Oral Expert Report

According to BRv, the written report describes a reason without the need to show personal sentiment from the expert. Each expert can show a different opinion. Written reports being signed by the experts. If one or more experts do not sign the report, the reason for not signing being stated in the report as far as possible. The registrar sent a copy of the written report to the parties [122].

6) Expert in Preliminary Examination

Pre-trial discovery concept in the common law legal system to establish the facts and develop evidence [123], where decisions are made for procedural matters is unknown in Netherlands [124]. However, information can be obtained before a lawsuit being filed to the court on several matters [125].

Since 1988, BRV also allow the court to order a preliminary examination by experts as well as on-site inspection. The court can also order a preliminary examination by experts when the process is already proceeding [126]. Before a case being adjourned, a temporary expert report or inspection or a temporary local inspection could be ordered at the request of the litigating party. The adjournment of the process could be carried out at the request of a party [127].

In the work edited by Chorus et.al., it is described how the parties can request a preliminary expert report by submitting a request at each stage of the trial as in the preliminary examination of witnesses. If the application being approved, the decision cannot be appealed. If the expert preliminary report being approved, the provisions concerning the expert report in the ordinary examination then applied. The procedure of preliminary expert report is similar to the preliminary examination of witnesses, which means it is always permitted [128]. This procedure allows the parties to avoid the loss of evidence before the trial process and to

estimate their possibility in litigation [129]. A preliminary examination to secure evidence also being regulated in the preliminary examination for witnesses [130].

7) Party Experts

Starting January 1, 2002 BRv stipulated that judges could also allow a party to engage an expert (partijdeskundigen or party experts) which are not appointed by the judge to be heard in the court [131]. The court before whom evidence is provided in a case can allow the parties to hear the experts on that occasion [132]. If the court has approved the examination of such experts, the other party is also entitled to request an expert examination on the same base [133]. At the request of a party or ex officio the court may order the expert to provide further explanation either orally or in writing [134]. Some provisions concerning witness examination apply mutatis mutandis for expert examination in the trial [135]. Cross-examination of experts is permitted for party experts. Each party can ask any questions directly to the expert [136]. The court ex-officio may appoint an expert if there is conflicting testimony of party experts [137].

8) Assessment of Expert Report

The judge is not bound by the written statement of an expert [138]. In other words the judge is free to assess the experts report, both of the court appointed and party experts [139]. However, in practice, the court will be very dependent on expert reports in making considerations of its decisions. If the court does not follow the expert's opinion, the judgment of the court will depend on the characteristics of the parties' objections to the expert's report [140]. Even though judges are not bound by expert opinions, if they reject expert opinions, they must be grounded [141].

The general rule is the evaluation of the evidence is the discretion of the judge, unless law stipulates otherwise [142]. In other words, the country adheres to the principle of free assessment of evidence. No methodological guidance for judges in assessing evidence freely. According to van Rhee, perhaps the best definition of the principle of free assessment of evidence in civil law in Netherlands is the judge decide the case based on intimate conviction [143]. According to Rijavec and T. Keresteš, the standard of proof in countries with the Roman civil law system is the intimate conviction in which to determine whether certain facts have been proven or not is the discretion of the judge [144].

Van Rhee explained that it is still a debate whether the Dutch civil law aims to establish the material truth or not. He explains that some writers argue that only formal truths are intended because collection of evidence outside the facts presented by the parties is not allowed. However, the ex officio power of the judge regarding the evidence with respect to the fact could help provide a certain balance between the material truth and formal truth [145].

9) Expert Immunity

Overgaauw and Verheij indicate no immunity and limitation of liability for the experts who testified in the court. Both party experts and court appointed experts can limit their contractual responsibilities. In many cases, the expert who being sued can avoid liability by plead a defense because the fault of others or contributory negligence. No visible effect of liability with the willingness of experts to testify in the court [146].

According to the Expert Practice Guideline, if there is an error in the expert work, correction mechanism exist for the parties and judges relating to the low risk of liability. The litigant can request the court's attention for possible errors of expert analysis and the court can request additional information. In short, errors in expert analysis can be corrected in subsequent litigation. However, experts are advised to obtain insurance for risk protection of professional liability and the cost of legal assistance [147].

10) Expert Practical Guidance and Registers

Evenblij describes the Netherlands experience in which lack of expert quality in court can lead to a wrong judges decisions. This happened because of a condition that Akkerma's called as the knowledge paradox or kennisparadox [148]. According to Akkermas, to be able to direct experts and assess their reports, a legal expert needs knowledge from other appropriate fields, however the fact that he does not have that knowledge is the reason for him to present an expert [149]. To bridge this situation, according to Evenblij, efforts were made to develop guidelines for experts and expert registers [150].

The expert practice guidelines in civil cases were published by the Dutch Judicial Council (rechtspraak) in 2008. The Practice Guidelines provide information concerning expert examinations and reports. The guideline is a directive for experts in carrying out their duties in accordance with applicable law, including provisions regarding expert evidence in BRv. Experts can use the guidelines in conjunction with the applicable standards in the expert profession concerned [151].

The Code of Conduct was created at the request of the Council of Justice and under the responsibility of the national consultative committee of the heads of the District and Appellate Courts. The code of conduct was developed based on the Netherlands Register of Court Experts (NRGD) code of conduct to realize a universal code of conduct. The code of conduct was made taking into account that the expert who has received his assignment must carry out his duties impartially and based on his best knowledge based on Article 198 BRv. Experts who are reporting in civil law cases should be appropriate experts. The accuracy lies in the

required expertise and personal of the expert concerned. Therefore, experts must meet five key values, specifically independence, impartiality, conscientiousness, competence and trustworthiness. The Code of Conduct applies to experts appointed by the District Court, the Courts of Appeal and the High Administrative Court of the Netherlands in civil and administrative law cases [152]. In addition to affirming the five key values of an expert, the Code of Conduct also emphasizes the personality that must be possessed by an expert, expert work, expert information and reports [153].

The expert model opinion relating to the expert practice guidelines in civil cases in the Netherlands is given to experts as a non-binding reference for preparing reports in accordance with the Practice Guidelines [154]. The expert model opinion contains a format of expert opinion given in writing which contains details about the expert, details of the parties and their representatives, related documents, questions of the court, matters relating to the examination, expert answers, the right to investigate and their obstacles, the principle of hearing both parties, answers to comments and questions, invoices for expert work, attachments and expert signatures [155].

No specific criteria for selecting experts. In general, judges appoint experts who are in the register [156]. In criminal procedures, the NRGD is the public institution who evaluates and registers experts [157] while for civil cases, judges use an internal list of frequently appointed experts (DIX). However, judges and court apparatus who use the list are not involved in assessing expert quality [158]. A national register of experts who testified in court, called Landelijk Register van Gerechtelijke Deskundigen (LRGD), is a private organization who evaluates and registers experts in various professions. These experts can provide information in civil, criminal and administrative matters. All experts are members of professional organizations [159].

C. COMPARATIVE ANALYSIS

The legal development on expert evidence in civil procedure law in both jurisdiction is apparent. Legal development on expert evidence in Netherland manifested and reflected in the amendment of Civil Procedure Code (BRv) and subsequent practical guideline. Different situation with legal development on expert evidence in Indonesia which occurred amid the effort of civil procedure law unification and codification. Expert evidence in Indonesia has been recognized in the current law and specified guideline for environmental cases and also widely accepted in the judicial practices including in civil environmental cases. The status of expert evidence in the Indonesian civil procedure law ostensibly no longer become subject of discrepancy among scholars. Similar with Indonesia, Netherland civil procedure law regulates court appointed expert both who are appointed by judges ex-officio and who are appointed by judges at the request of the parties. Expert opinion can be submitted in writing or verbally and judges are not bound by expert opinion.

Expert appointment is one important aspects for their accessibility and reliability. Netherland BRv contains comprehensive provisions concerning court appointed expert, the possibility of expert appointment by the court in preliminary examination and the possibility for the judge to allow a party to present party expert. BRv regulates the procedures for investigation by court appointed experts, the right of such expert to obtain compensation and honorarium and the expert's obligation to provide impartial opinions based on his best knowledge which couldn't be found in the Indonesian HIR/RBg. However, Indonesian civil procedure law stipulates rules on the expert appointment and for environmental cases completed by the EG which provide directions on expert qualification, appointment of court appointed expert and how expert fees should be compensated in such case. Both jurisdiction stipulates provision which provide possibility for both litigants' expert and court appointed expert to testify in the court. Not like in Netherland in which the right of court appointed expert for honorarium and compensation as well as relief for expert fees for economically uncapable which are regulated in BRv, no such rule in Indonesian HIR/RBg. Court appointed expert in Indonesia is rarely practiced, despite its impartiality advantage, compared to litigant expert. The EG expert criteria provide direction for judges and parties to propose qualified expert in associated science which expected to provide a reliable opinion, while needs to acknowledge the variability and availability of expert in connection with the nature of the case.

Despite the Indonesian HIR/RBg BRv doesn't regulates expert's obligation to provide impartial opinions based on his best knowledge like in Netherland, the Indonesian HIR/RBg stipulates provision on expert oath or promise in which the expert must states he will "…provide the best and most accurate opinion to the best of his knowledge in his expertise." No such stipulation on expert oath in the Netherlands BRv. In both jurisdiction, expert opinion can be submitted in writing or verbally and judges are not bound by the expert opinion. The practice of providing expert opinion in court in Netherlands also supplemented with practice guidelines, codes of conduct and expert opinion models. A guideline for the expert as exemplified by the Netherland might be the appropriate place to specify an expert report to safeguard their fidelity especially when written report is required, such as when joint investigation is needed. Mandatory expert oath or promise and

the expert code of conduct could be seen as an instrument to ensure the expert objectivity. No rules on expert immunity in both jurisdiction which could conceivably encourage the experts to help the court.

5. Conclusion

Survey result and its comparative analysis of provisions and to some extent judicial practices for expert evidence in Indonesian and Dutch civil procedural law particularly concerning civil environmental matters has been described. The condition in both jurisdiction could be analysed to understand how it aligned with the question of accessibility and reliability of expert evidence. Accessibility issue connected with expert appointment, fees and immunity. While reliability issue related with the expert appointment, qualification, objectivity, impartiality and report quality. Both jurisdictions regulates expert evidence in its civil procedural law with different level of elaboration in term of expert appointment and its subsequent rules such as expert report, procedure for investigation, compensation and honorarium, impartiality and objectivity assurance which could predispose the court settlement of environmental cases in practice. For historical reason, the rule on court appointed expert and party expert in the Dutch civil procedural law and its development could be learned for future development of Indonesia civil procedural law and specific guideline such as for environmental cases with due regard to the fairness in truth seeking in adjudication.

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