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Exploring the diversity of conceptualizations of nature in East and South-East Asia

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This article sheds light on the diversity of meanings and connotations that tend to be lost or hidden in translations between different conceptualizations of nature in East and South-East Asia. It reviews the idea of "nature" in Chinese, Japanese, Vietnamese, Filipino, Tagalog, Cebuano, Lumad, Indonesian, Burmese, Nepali, Khmer, and Mongolian. It shows that the conceptual subtleties in the conceptualization of nature often hide wider and deeper cosmological mismatches. It concludes by suggesting that these diverse voices need to be represented in global reports on sustainability, which can be fostered by the direct involvement of experts from diverse traditions of thought who have access and interpretative knowledge of sources in languages other than English. To take into consideration the diversity of conceptualizations of nature can lead to better decisions about sustainability and improve the acceptability and efficiency of environmental policies in each local context, as well as internationally. Solutions and policies on the ground must be designed based on the local conceptual and cultural frames.

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Introduction

In recent years, "#ForNature" has been the tacit official "hashtag" or slogan most used by international organizations in online communication when writing about environmental issues (including UNEP, UNDP, and other United Nations bodies)[1]. Humans are taken as opposed to this nature; they are threats to it and their activities can destroy it. This view appears clearly in recent discourses by the United Nations Secretary General Antonio Guterres: "Humanity is waging war on nature" (December 2nd, 2020) and "we are losing our suicidal war against Nature" (October 11th, 2021)[2]. The word "Nature" is also used extensively in scientific articles, reports and assessments. For instance, the expression "Nature's Contributions to People" was coined as an alternative to "ecosystem services" (Ellis et al., 2019; Dean et al., 2021; Muradian and Gómez-Baggethun, 2021) and is now widely used in IPBES reports (IPBES, 2019).

When it comes to environmental issues, "Nature" is a keyword in sciences and academic research as well as the communication and advocacy of international organizations at the global level. Yet, this word is loaded with a heavy historical and sociocultural context and multilayered assumptions that can be arduous to translate (Ducarme and Couvet, 2020). On the one hand, the dominant use of the English concept of Nature in global sciences and communication discourses can make it appear as if there was a globally consensual understanding of its meaning and a tacit agreement with its underlying assumptions. As a result, the international community working in English could be blinded to the high diversity of worldviews that lie beyond the linguistic bubble of English (Mair, 2003), and miss the abundant non-English knowledge sources, including scientific sources. For example, Lynch et al. note that over 96% of sources across the eight IPBES assessments they analyzed were in English (Lynch et al., 2021), which reflects a severe linguistic bias in the English-speaking scientific community. On the other hand, these global discourses aim at framing the ways of thinking of decision makers worldwide and sometimes include explicit policy options or recommendations as well as normative advocacy calls, which could lead to the one-sided imposition of an idea of Nature and its underlying cultural assumptions on other sociocultural groups and worldviews outside the English-speaking community.

East Asian and South-East Asian conceptions of the natural world tend to be mentioned only superficially in global reports about the relationships between people and nature. To address this gap, there is a need to make accessible to the global English-speaking audience the diverse conceptualizations of nature (Coscieme et al., 2020) that are and have been widely debated in various East and South-East Asian traditions of thought, by native and international scholars. This paper follows calls for more linguistic inclusivity and pluralism in high-level environmental governance (Pascual et al., 2021) and complements recent articles on the global linguistic diversity of concepts of "nature" (Coscieme et al., 2020; Ducarme et al., 2021) by exploring in greater detail selected languages within their cultural context and traditions in the East and South-East Asian region. The objective is to make accessible to English readers a panorama of a selected few of the diverse conceptions of "nature" in East and South-East Asia, and to give an idea, based on primary literature, of the depth of the complexity of the debates that exist in each linguistic and cultural circle to a reader external to this circle. Given the wide range of these debates, an exhaustive description is impossible, and this article cannot provide an in-depth philosophical and historical analysis of each of the concepts in their own traditions. Nevertheless, this article hopes to avoid as much as possible oversimplifications, as well as to pave the way for future research greater in scope and depth.

Methodology

East Asia (China, Hong Kong, Macau, Japan, Mongolia, North Korea, South Korea, Taiwan) and South-East Asia (Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam) are understood here following the UNSD definition. This article presents a general review of the idea of "nature" in eleven languages of the region: Chinese, Japanese, Vietnamese, Filipino, Cebuano, Lumad, Indonesian, Burmese, Nepali, Khmer, and Mongolian.

Native or local experts who work in environmental humanities were invited through the *Network of Asian Environmental Philosophy* to contribute by filling up a form or by writing a few paragraphs about the meanings, nuances, and origins of the words used for "Nature" in their own language(s) and culture(s). They were encouraged to do a literature review in their language and to make suggestions regarding the form, the scope, and the limitations they faced. The first draft of the form was elaborated thanks to preliminary bilateral discussions, and further improved through the experts' suggestions. The preliminary results as well as the scope and objectives were then discussed and elaborated by the voluntary experts in a first online workshop on July 29th, 2021. The results were compared and conclusions were drawn from them during the discussion on a preliminary draft of paper during a second online workshop on October 1st, 2021. A final draft of the paper was discussed in a third workshop on November 17th, 2021. As a whole, twelve (12) experts attended at least once an online workshop, and two others individually contributed. Some experts encountered severe difficulties in the access to resources and books due to restricted access to the resources themselves, and to the unreliability of internet connection in some areas.

The exploration of each conceptualization of nature is conducted in very different contexts of research, which leads to different methodological approaches adapted to the context analyzed. For instance, the Chinese and Japanese cultural traditions have a long history of analysis of words and their etymology, which leads to an abundant historical, philological, and philosophical literature on the subject, and to the need to take, at least partially, a historical approach to capture the diverse connotations in today's usage of the concepts of nature. In contrast, to the best of our knowledge, there is little local literature on environmental philosophy or historical analysis of the concepts of nature/environment in Indonesian, Filipino or Vietnamese, as well as in many other Indigenous languages in South-East Asia. For this paper, researchers had to rely on sources that bring us closer to philosophical anthropology or linguistic anthropology, including interviews with local experts, discourse analysis, and analysis of text and debates in environmental law. These differences in cultural traditions were reflected in this paper in the difference in the methodological approach and tone taken in each contribution. To forcefully apply the exact same methodological in each context would have failed to give credit to the diverse sociocultural subtleties, which is exactly what this article aims to shed light upon.

Primary sources and secondary sources in the language at stake were privileged, and secondary sources in foreign languages were used to confirm the former. Many environmental philosophy works in Western languages are inspired by "Asian" traditions and engage in a reinterpretation and adaptation of "Asian" ideas to address contemporary issues (Callicott, 1989), but their main goal is not render the meanings of nature in each language and culture, and therefore they are not centrally relevant to the objectives of this paper.

What does "nature" mean?

The general hypothesis underlying this paper is that the language used to present, think, debate and make decisions regarding a specific issue is not neutral. This hypothesis of linguistic relativity, also known as Sapir-Whorf hypothesis (Kay and Kempton, 1984; Koerner, 1992; Neuliep, 2017), suggests that the structure and the specific features of a language's influence thought and decisions. Research has also shown that using a foreign language can lead to a reduction of heuristic biases in decision-making in some specific contexts, because the foreign language tends to be less tight to emotional components (Keysar et al., 2012; Costa et al., 2014). Further, language expressions have connotations that arise from their denotations, from experiences, beliefs, prejudices as well as from the contexts in which the expression is typically used (Allan, 2007). Connotations are pragmatic effects that can also influence thought and decision-making. Specifically, if languages and the connotation bound to expressions for "nature" in different languages can influence the decision-making or implementation of environmental policy (Inglis and Pascual, 2021; Tauro et al., 2021), to unveil these connotations and diverse meanings is central to fostering mutual understanding and to facilitate collaboration as well as the development and implementation of environmental policy across languages and cultures.

To define the scope of the research revealed to be challenging, as it appeared in the difficulties we faced during the elaboration of the grid and the first online workshop. Indeed, a term can be developed in multiple ways throughout history, such as with the Chinese word "zìrán" that was interpreted and used in various ways across different schools of Taoism, Confucianism, and Buddhism, let alone the current usages of the word. A term can also be rooted in other languages, such as the Indonesian "alam", which has linguistic roots in Malay and Arabic, raising the question of until where an etymological exploration was relevant. Another question was whether the focus was on the current meanings, perceptions and connotations of the word(s) that are used today as a translation for the English "nature" in the other languages, or on the history and meanings of words used to capture something similar to what the English "nature" encapsulates. The former option could be approached by a linguistic quantitative study, which was set aside. The latter option raised the question of defining the meaning and the range of the concept of "nature". From this conceptual definition of the "natural environment", we could then find the corresponding words in each language. This latter option raised the risk of reifying concepts and the difficulty of finding (or building) a common starting point to capture what the "natural environment" is. Ironically, to define the scope of the research from a top-down definition of what the "natural environment" meant for our group of researchers seemed to be precisely excluding what we wanted to shed light on; the diversity of conceptualizations and worldviews of the natural world. In each language, the words for the "environment", like the words for "nature", reflect different categories that can at times be ambiguous and vague. Similarly, to propose definitions of concepts of "nature" from "local" cultures would require in-depth conceptual work in each given linguistic and cultural context, while the relevance of the result remains uncertain given that it could differ from the actual usages "on the ground", and that it raises questions regarding the legitimacy of the developers of the concepts vis-à-vis the sociopolitical and cultural contexts at stake.

These preliminary difficulties already reflected a first key finding: There is a gap between the usages of the word "nature" and its translations in natural sciences, engineering and economics, which tend to appear as homogenized globally, versus the usages in daily life, politics, and culture. The former usage captures a *narrow understanding* of the word "nature", which is deeply influenced by so-called Western sciences. Many languages added this narrow understanding to a formerly existing word in response to the influence of "Western" sciences (Robert, 2018, p. 34), especially in the field of environmental policy-making. As a result, there tends to be an overlap of meanings for the same word, which leads to highly diverse connotations depending on the language. These connotations are tainted by the changes of the word through history and the contexts of usage. For instance, the Japanese word "*shizen*" is used today as a translation for the word "nature" in environmental policy-making and natural sciences, which deviates from the premodern usage of the word. The narrow meaning has not erased the former meanings, which remain present, be it when the word is used in other contexts, other connotations, or other grammatical functions. Similarly, there can be a mismatch between the languages, as in the case of Filipino, where the most common equivalent word for the noun "nature" comes from an adjective. Such grammatical differences can also greatly influence the usages of the word and the ideas and nuances conveyed by it.

To overcome these difficulties, the *narrow understanding* of nature, as used in policies and laws, was explored as a starting point. Environmental policy recommendations, policies and laws have significant influences on practices. Especially in the field of sustainability, some policies are translated into local contexts from policy options or recommendations proposed by international organizations or science-policy bodies that often work in English. For instance, a conservation policy that opposes humans to nature and interprets humans as threats to natural elements can conflict with the local understandings of "nature" (Ironside, 2015; Domínguez and Luoma, 2020). Be it in the direction of the English policy adapted to the other language, or in the reverse direction when local considerations regarding implementation are brought back to the international science-policy community, some key aspects risk getting lost in translation. This is apparent in the fact that, in texts translated to share knowledge about sustainability, one English word, such as "nature" is often turned into several words in the other languages depending on the contexts, as it is the case in Vietnamese. This reflects the overlapping of meanings in the English words themselves, which translates into many different words in other languages.

The idea of "nature" from Greek/Latin/English to the narrow understanding. The English word "nature" is generally understood narrowly as excluding humans and cultures (except for the expression "the nature of something"). The current "Western" usage of the word nature reflects a series of dichotomies: natural/artificial, nature/culture, human/nature. In the narrow understanding that is dominant in engineering, natural sciences, economics and policy-making, all inartificial beings except humans, spirits and gods tend to be included in nature. These connotations are rooted in historical and etymological backgrounds and tainted by religious and scientific influences.

The English word "nature" stems from the Ancient Greek *phusis* (φύσις) and the Latin *natura*. The term *phusis* comes from the Indo-European root **bhū*—which primordial meaning is "to grow", especially when speaking of vegetation (Naddaf, 2005, p. 168). This Indo-European root also appears in some Asian languages, and finds echoes in the conceptions of nature that stem from Ancient Indian thought. For instance, the Pāli word *sabhava* and the Sanskrit word *svabhāva* refer to the intrinsic nature of something and include the same Indo-European root **bhū-*. According to Gerard Naddaf, in Ancient Greek, "as an action noun ending in *-sis, phusis* means the whole process of growth of a thing from birth to maturity" (Naddaf, 2005, p. 3). Premodern, modern and contemporary commentaries show a wide diversity

of interpretations for the Greek *phusis*, depending on the author, their own philosophical positions, the texts analyzed, and the approach (philological, philosophical, etc…) (Lloyd, 2018, pp. 20–21; Valeyre, 2019). The primary image of nature (*phusis*) in Greek referred to a "vegetal growth" and its fundamental representation was a "spontaneous arising of things" (Merleau-Ponty, 1995, p. 9; Hadot, 2008, p. 40). Aristotle suggested the distinction between "nature" and "technic" and, correlatively, the distinction between "natural" and "artificial", which profoundly influenced Western conception of "nature". Despite the absence of a homogenous idea of nature (*phusis*), humans are generally included as part of nature in Ancient Greek thought (Descola, 2015, p. 128).

Derived from the Latin verb *nascor* ("to be born", "to live"), the Latin noun *natura* was used by Cicero to translate the Greek *phusis*. Some research considers that this was also Cicero—influenced by Aristotle's distinction between natural and artificial—who suggested the distinction between "nature" and "culture" (Ducarme and Couvet, 2020). The word *natura* is mainly understood as dynamic and includes both Greek and Latin meanings and connotations. Under the influence of Christian conceptions, *natura* became associated with the idea of "creation" (*creatio*). As a result, nature came to be understood as the fruit of God's action or will in contrast with the consequences of human activities. Descartes' call for human beings to advance sciences and become "like masters and owners of nature" (*Discourse on the method*) has been misinterpreted as a desire for humans to become God. This call is now considered as a core program of modernity and has been diversely criticized. Finally, under the influence of sciences—especially in physics of Galileo Galilei and Newton's works— mathematics also came to play a central role in the modern conceptualization of a material nature that can be measured and systematically assessed.

The plural history of the idea of nature leads to a plurality of meanings in modern languages, out of which four main definitions of nature can be distinguished (Ducarme and Couvet, 2020):

1. "The whole of material reality, considered as independent of human activity and history".
2. "The whole universe, as it is the place, the source and the result of material phenomena (including man or at least man's body)".
3. "The specific force at the core of life and change".
4. "The essence, inner quality and character, the whole of specific physical properties of an object, live or inert."

The idea of nature does not have a unique and homogenous meaning in English—and more widely in European—languages. Partially reflecting definition (1), the *narrow understanding* of the word "nature" as used today in natural sciences, engineering and economics, as well as in policy-making, generally reflects the series of dichotomies (natural/artificial, nature/culture, human/nature) that tear off humans and their doings from the rest of reality. In environmental policy-making, this narrow understanding grew closer to the ideas of environment, biodiversity, and the whole of non-human living beings. Slogans such as "Act #ForNature" evoke images of green forests, blue waters and charismatic wildlife that need to be protected from destructive human activities. This "nature" does not reflect the definitions above, but captures narrowly the non-human living beings and ecosystems, often focusing on wildlife that exists independently from human activities such as domestication and agriculture. This *narrow understanding* of "nature" that underlies high-level environmental governance constitutes in this paper the starting point for the exploration of equivalents in other languages in East and South-East Asia.

A panorama of diverse conceptualizations of nature in East and South-East Asia

The narrow understanding of nature is sometimes dissonant with the usages in the other languages studied in this paper. However, how do we select the words to be studied in the other languages in order to capture these dissonances? When available, official translations of international governance documents were used as starting points and the scope was later widened to include other potential words and concepts that could reflect or be related to the narrow understanding of nature. A single word that captures the whole of things encountered in the world that are different from—or excluding—human beings is not easily found. The scope of words tends to be either too broad or too narrow, because the distinctions between living beings (including between different types of living beings), non-living things and spiritual beings are not easily comparable across languages and cultural contexts. This paper explores different conceptualizations of nature with the aim of shedding light on these mismatches in scopes and these dissonances that tend to be lost or hidden in translations. Table 1 synthesizes the conceptualizations reviewed in this paper.

Throughout history, influences from different cultures nurture the development and changes of meanings and connotations attached to words. The narrow understanding of "nature" conveyed by environmental sciences and policies enjoys nowadays a dominant influence over other conceptualizations of the natural world across the world. However, this newcomer influencer does not eliminate previous meanings and their connotations. Underneath this influence by "Western" sciences, all conceptualizations of nature explored in this paper are rooted in local traditions. Environmental ideas were also exchanged across Asia through history, as exemplified by the work of Sai On, a forestry policy-maker in Ryukyu (southern Japan) and China in the seventeenth century (Okuya, 2020). We ordered the contributions for each language explored in this paper based on the resemblance of their conceptualizations of nature and on the relevant similarities of their origins and influences. Languages related to the Sinosphere are presented first, as we were able to trace, specifically regarding the concept of "nature", mutual influences between Chinese and Japanese, and from Chinese to Vietnamese. Mongolian was placed next for its geographical proximity to the Sinosphere and historical interactions with Tibetan Buddhism, which brings us to the sphere of influence of Buddhism, with, from north to south, Nepali, Burmese and Khmer. Moving away from the continent, we finally present an "archipelagic" group of languages from Indonesia and the Philippines, that were strongly influenced by Indigenous cultures and, respectively, Islam and Christianity. A different order would, of course, have been imaginable by following other criteria.

Chinese. Nowadays, the term *zìrán* 自然 is almost a fixed translation in modern Chinese of the environmental aspect of the English word "nature". Yet, throughout the history of translation in China, many other words were used, with conceptual differences between the term "nature" and those Chinese translations (Cheng, 2018). From the early nineteenth century to the Opium War (1840–2), the western missionaries usually used *xìng* 性 and *tiāndì* 天地 to translate nature (Lin, 2009). According to Chinese dictionaries, while the former usually referred to the essence or innate quality of things (Schipper, 2013), the latter literally referred to the world (Comprehensive Chinese Word Dictionary Editorial Board, 1994, p. 1412; Editorial Board of Great Compendium of Chinese Characters, 2010, p. 5127). In the same period, the term *zìrán* was taken as an adjective or an adverb to render "natural" or "naturally". After the Sino-Japanese war (1894–5), the word *zìrán* gradually became the main translation

Table 1 Synthesis of the panorama of some of the conceptualizations of nature in East and South-East Asia.

Language	Nature	Pronunciation	Nature meaning(s)	Cultural influences[a]
Chinese	自然	zìrán	What is by itself, not forced by any external influence	Taoism, Buddhism, Confucianism
Japanese	自然	shizen/jinen	(1) Spontaneous state of things (2) What is without human influence (3) What cannot be anticipated by human capacities. Humans and spirits can be included or not; Gods are included in *Tenchi*	Buddhism, Shintoism, Animism, Chinese culture
Vietnamese	(Etymology: 天然/自然)	Thiên nhiên/Tự nhiên	Everything that exists surrounding the human being and except the human being (animals, plants, soil/water/air environments)	Chinese culture, Buddhism
Mongolian	байгаль/ ᠪᠠᠶᠢᠭᠠᠯᠢ	Baigali	*Tengri* (God of Heaven) and *Etugen* (Great Mother Earth) Humans belong to nature	Shamanism
Nepali	प्रकृति	Prakriti	Eternal and beyond perception The original or natural form or condition of anything, original or primary substance. It includes humans, but not gods and spirits	Sanskrit, Hinduism, Buddhism
Burmese	သဘာဝ	Thabawa	As it is + phenomena Three types of worlds (material, animal and phenomenal)	Buddhism, Pali
Khmer	ធម្មជាតិ	Thommocheate	Everything surrounding us that is not man-made (animals, humans, rocks, etc.). Nature is a gift	Buddhism
Indonesian	(etymology: 'ālam)	alam	Everything that exists in the skies and in the earth, with minimum (though not none at all) human intervention	Arabic language, Islam, Malay culture
Filipino/Tagalog Cebuano Lumad		kalikasan kinaiyahan puwaason/kulaw-wan	Together with nature; Life sources (includes spirits) Mother nature (obligation to reciprocate) Land is life itself; Intimate relationship between Earth and its people	Christianity, Indigenous cosmologies
English/Latin/Greek	(etymology: natura; φύσις)	Nature	(1) Spontaneous growth (*physis*); (2) Dichotomies: natural/artificial, nature/culture, human/nature. All inartificial beings are included, except humans, culture, spirits, gods	Greek philo., Christianism

[a]All conceptualizations of nature listed in this table were also influenced by the local traditions, and by "Western" sciences and the narrow understanding of nature. The influences in this column are mentioned on an indicative basis to help the reader situate each conceptualization of nature in a broader context.

of (environmental) nature through the massive importation of Japanese Kanji translations. By the beginning of the twentieth century, the original connotation of *zìrán* in Chinese was supplemented by the western idea of nature.

In contemporary Chinese, due to the adoption of the European meaning through translations, *zìrán* used as a noun does exclude humans in a similar way as the English narrow understanding of nature (Harbsmeier, 2010; Ducarme et al., 2021). However, when *zìrán* is used as an adjective or an adverb, it still retains the way how the word *zìrán* was used in ancient Chinese (Mandarin Dictionary Editorial Committee, 2013, p. 1723). In ancient China, human beings were included in *zìrán*, including when the word was used as a noun. Etymologically, the words 自 (*zì*) and 然 (*rán*) have their own meanings. In the term *zìrán*, *zì* is a pronoun meaning "oneself", referring to the subject of the sentence itself, and *rán* means "in this way" or "so", which refers to the current state of the subject of the sentence. In Chapter 17 of *Laozi* (sixth century BCE), *zìrán* is used to express their life "free from the domination of the ruler" 功成事遂 百姓皆謂我自然 (Liu, 2006, pp. 207–217)[3]. In *Zhuangzi* (fourth century BCE), *zìrán* is used to describe the state of the object of action "free from the subjective thoughts of the actor", which is the basis for the behavior of the ideal personality (汝遊心於淡 合氣於漠 順物自然 而無容私焉 而天下治矣 (Guo, 1985, pp. 294–295)). Finally, *Xunzi* (third century BCE) uses *zìrán* to describe the personality (*xìng*) that is present in human beings from birth and "unchanged by learning" (散名之在人者 生之所以然者謂之性 性之和所生 精合感應 不事而自然謂之性 (Liang, 1965, p. 311)). Accordingly, at least before third century BCE, in ancient China, *zìrán* refers to a state free from external influence. Compared to these traditions, Buddhism later extended the connotation of *zìrán* to include everything, not only about human beings. Specifically, in the Song dynasty (960–1279), *zìrán* has the identical connotation with *fǎěr* 法爾, which means that "as it is" or the true nature of things (according to the *Taishō Shinshū Daizōkyō*, vol. 54, Sutra No. 2131, p. 1085, column a, lines 16–18 (Takakusu and Watanabe, 1924)).

Ancient Chinese did not have a proper noun denoting an environmental nature that excludes humans. Instead, it tended to directly name the things in the environment, such as the streams (川), ponds (淵), mountain forests (山林) (see e.g., *Xunzi* Chapter 14 (Knoblock, 1988, p. 206)). For a more wide-encompassing term, the western missionaries used *tiāndì* 天地 as a translation of nature. Also used in Japanese (pronounced as *tenchi*), *tiāndì* literally refers to sky and earth and came to signify the universe, the world, or all things in the world. It can also refer to the laws of nature beyond the "norms of human behavior" (極而反 盛而衰 天地之道也 人之理也 (Chen, 2019, p. 172)). The term *tiāndì* has many other meanings, and refers to (environmental) nature only in few situations. Finally, the word *wànwù* 萬物, which is also widely used in traditional Japanese texts as *banbutsu/manbutsu* 万物 might be more relevant to refer to (environmental) nature. In the word *wànwù*, *wàn* denotes "ten thousand", and *wù* means "thing"; *wànwù* is literally translated as "ten thousand things", which actually means everything in the world including human beings (Comprehensive Chinese Word Dictionary Editorial Board, 1994, p. 465).

In sum, beyond the nowadays conventional *zìrán*, the words *tiāndì* and *wànwù* could also be good candidates for capturing the environmental aspect of nature. Yet, each word differs from the narrow understanding of nature insofar as they not only refer to material reality, and sometimes also include human beings.

Japanese. The word composed of the same two Chinese characters for *zìrán* 自然 is currently used in Japanese to refer to nature, pronounced as *shizen* or *jinen*. It appeared in Japan in the eighth century, in *Fudoki* 風土記 and *Man'yōshū* 万葉集 (Hiromatsu, 1998, pp. 639–640). In the context of the history of ideas, this expression was used by Kūkai (空海, pp. 774–835), founder of Shingon Buddhism, as a translation of the Sanskrit expression *svabhāva* (which refers in Indian Buddhism to the intrinsic nature of something) but with a Taoist meaning. In his *Jinen hōni* 自然法爾, Shinran (親鸞, pp. 1173–1262), founder of True Pure Land Buddhism, suggests reading *jinen* 自然 as "to be in a spontaneous state without any artificiality" (through the expression *onozukara shikaru* 自ずから然る). However, under the influence of the Western world (at first through Dutch studies), the word *jinen* progressively acquired the Western meaning of "nature" (Berque, 1997; Jannel, 2015). Owing to this history, three main meanings are nowadays overlapping in the Japanese word that is usually used as a translation for nature (Gorō, 2002):

(1) read *shizen* or *jinen*: self-such, spontaneous state of things,
(2) from Western philosophies (*physis/natura/nature*): what is as it is without human influence (contrast with what is artificial),
(3) what cannot be anticipated by human capacities.

For most current Japanese people, *shizen* 自然 probably evokes green mountainous forests. Besides, the view of nature of Ainu indigenous people in northern Japan (Hokkaidō) was influenced by their lifestyle based on hunting (Shimadu, 2017, p. 66), while Ryukyu's people in the southern area of Japan (Okinawa) have ancestral beliefs centered on the sea (Hori, 2012).

Another word is widely used in Japanese to translate the "environment": the noun *kankyō* 環境 (especially in the field of environmental sciences and policy). Dictionaries distinguish two meanings, namely (1) the surrounding area and (2) the "surrounding exterior world", which can include human beings, and note the expressions "natural environment" and "social environment" (Kōjien, 2018). Traditionally, many other words have been used to capture the scope of the English word for nature, some of which were already described in the Chinese section. These other concepts are rooted in different philosophical and religious traditions and are rarely used today outside of the contexts of these traditions (Droz, 2020; Paşca, 2020). For instance, "*sanzen sansen sōmoku*" 三千山川草木, literally "all mountains and rivers, plants and trees", includes all the things that exist in nature (excluding human beings and artificial things). Another key term that is sometimes interpreted as meaning "nature" is the word for "world" (*sekai* 世界). In Buddhism, it included everything in the sky, on earth and in the sea that is around Mount Meru. It came to take other meanings, such as the whole of human society, the human and real world, as well as meanings similar to the English "the world of", namely referring to a specific group or people. The term *fūdo* 風土, sometimes translated as "milieu" (Droz, 2021), also refers to the local specificities of a land including the mutual influences between the landscape, the climatic conditions, the groups of beings—including humans—living there, as well as the socio-cultural elements.

Vietnamese. The Vietnamese conceptualizations of nature lies at the intersection of diverse local worldviews (Vuong et al., 2018), modern "Western" sciences, and Taoist and Chinese influences (Vietnam was under several Chinese dynasties rule from 111 BC to AD 939 (Culas, 2019)). There are two main words in Vietnamese used for "nature": *Thiên nhiên* and *Tự nhiên*. The first one is the most widely used in Vietnamese today in the sense of nature as in the natural environment. It is etymologically rooted in a combination of Chinese characters (*tiānrán* 天然) composed of the character for the sky (*tiān* 天) and of the second character

(rán 然) of the Chinese word for nature "zìrán" (自然) (Dao Duy Anh, 2005, p. 798). It includes animals, plants, soil/water/air environments where animals and plants are living in. The second one is rooted in the Chinese characters that are still used today in Chinese and Japanese (zìrán/shizen 自然) and it has two meanings: (1) it can be used as a synonym of Thiên nhiên; and (2) it can refer to the nature of something or someone; its character and personality (Dao Duy Anh, 2005, p. 747).

The worldview of the Kinh—which represents the ethnic majority in Vietnam—is characterized by three interacting worlds: Heaven, Earth and Humanity (Thien, Dia, Nhan) (Cuc, 1999). The eternal world of Heaven includes natural phenomena of the sky such as rain and sun, and gods. The world of Earth encompasses forests, rivers and seas as well as gods and spirits. All things made by humans are included in the changing non-natural "human world" on Earth, as well as invisible ancestors. Spiritual entities such as gods, spirits and the ancestors exist in each of these three worlds, but usually remain invisible to people. According to Le Trong Cuc, nature and people always go hand-in-hand in the Kinh worldview, and humans are supposed to "continually try to maintain balance and harmony while respecting nature" (Cuc, 1999, p. 70). This reflects Duong and van den Born's findings that most Vietnamese participants in their study qualify their relation to the natural environment like "family", in which humans and natural elements are mutually important (Duong and van den Born, 2019, p. 7).

Mongolian. In Mongolian, "nature" can be expressed as baigali (Байгаль, or ᠪᠠᠶᠢᠭᠠᠯᠢ in traditional Mongolian script). It shares its origin with Lake Baikal, the largest freshwater lake in the world located in southern Siberia. Lake Baikal has been associated with Tengri (тэнгэр, ᠲᠩᠷᠢ), the god of heaven, as skies reflect themselves on the surface of the water, that is, on Earth. In the mythology of the Mongolic people, related to shamanism, the god of the sky Tengri exists next to Great Mother Earth, the goddess Etügen ekh (Этүгэн эх). Often represented as a young woman riding a gray bull, Etügen exemplifies Mongolian cultural approaches that revere nature as powerful, motherly and protective.

In traditional Mongolian myths, Mongols originate in the forests of Siberia, from the union of a mythical deer—reflecting woman's beauty—and a wolf—reflecting men's strength. Moreover, human beings are all children of the Great Mother Earth, and thus belong to the living world of nature (Humphrey et al., 1993). In this view, human beings not only belong to nature, but they also find happiness in nature, as shown by the saying: "Mans' happiness lies in vacant steppes" (Эр хүний жаргал эзгүй хээр). This expression is strongly connected to the nomadic ways of life. Herders often left the house to put out the livestock to pasture, staying alone on the meadows for days. Mongolian culture is grounded on the outdoors, where herders absorb the powers of nature (Oestmoen, 2000). Human beings are parts of the interactive system of nature; they have their place in nature and can use what is necessary for their existence, but shall not overuse it. As the word for nature in Mongolian, baigali, includes human beings, Mongols added the term "surroundings" (orchin, орчин) to express the environment without human beings.

Nepali. The term prakriti (प्रकृति), the Nepali word for nature, refers to the original or natural form or condition of anything, or the original or primary substance. Etymologically, it comes from the Sanskrit for "nature," "source". In the Sankhya system (dar-shan) of Hindu philosophy, this word refers to the material nature in its germinal state, eternal and beyond perception. When prakriti (female) comes into contact with the spirit, purusha (male), it starts a process of evolution that leads through several stages to the creation of the existing material world. Except gods and spirits all terrestrial animals, fishes, birds, plants, insects, humans and rocks are included in prakriti. Another word, vata-varan वातावरण, is often used to refer to the environment or to the natural world, which is understood as being composed by five significant elements (space, air, fire, water, and earth).

The contrast between "nature" and "culture" as found in the narrow understanding of nature appears not to be reflected in the same way in the main Nepali worldview: "In South Asia the clearest representation of this contrast, if it exists in empirical form at all, is not to be found within the preliterate world in itself, but in the distinction between populist, natural models and the codified literate worlds of the "Great Religions", or Buddhism and Hinduism" (Graham, 1995). Similarly, Campbell studied the narratives regarding nature of the Tamang-speaking people, an indigenous group in Nepal, and notes that categories for natural elements and species "cannot be divorced from the ideology of natural difference between castes and the effects of naturalized inequalities of power" (Campbell, 1998, p. 123). Instead, the conceptualization of other species and the natural world are mixed with spiritual elements, and borders between castes and groups of people appear to be even stronger than the "human/non-human divide". The latter seems to be breakable, as in the tales of reproduction between humans and non-human living or spiritual beings. In sum, "It is impossible to disentangle what the people of the Buddhist Himalayas think about the natural world, about plants and animals, from what they think about themselves" (Aris, 1990, p. 99).

Burmese. The Burmese word for nature is "Thabawa" (သဘာဝ), which literally means "as it is". It originates from the Pāli word Sabhava (sa + bhava). "Sa" means "as it is", "bhava" means "condition, nature, becoming, phenomenon" (Hoke, 2017, 2018). In Myanmar philosophical thought, the concept of nature is related to ontology, epistemology and ethics. Nature ("As it is") is "Reality". Understanding Dhamma (nature) of the phenomena of mind and body is to realize the reality of the conditional relation of man and his environment (The Burma Socialist Programme Party, 1963). Phenomena of mind and body of man and matter of environment including human beings are interdependent correlation by ways of morality and reciprocity (Hart, 1987).

In Myanmar philosophical thought based on Theravāda Buddhism, there are three kinds of worlds: the "material world" (Okasaloka သြကာသလောက), the "animal world" (Sattaloka သတ္တလောက), and the "phenomenal world" (Sankharaloka) (Tun, 2018). The natural environment (or the natural world) is made up of matter and includes both matter and animals, but excludes human beings. In other words, the animal world (Sattaloka) and the material world (Okasaloka) are both parts of the natural environment (Thabawa Partwonkyin). In this sense, the natural environment amounts to the Phenomenal World in Burmese ontology.

Another word is used for the environment, "Partwonkyin" ပတ်ဝန်းကျင်, which refers to what is around or the surroundings, and includes human beings. There are three kinds of environment (Myanmar Language Commission, 1993): (1) natural environment (thebawa partwonkyin သဘာဝပတ်ဝန်းကျင်), (2) human environment (lu partwonkyin လူ့ပတ်ဝန်းကျင်) (3) and social environment (lumu partwonkyin လူမှုပတ်ဝန်းကျင်).

Khmer. In Khmer, the word used to translate nature is Thommocheat ធម្មជាតិ. It refers to everything surrounding us that is not human-made and includes all types of animals, fishes,

birds, plants, insects, humans, rocks, etc. There is also another word for the "environment", *bak-ri-tharn* បរិស្ថាន, which includes the surrounding objects and the social and cultural conditions that affect human individuals and communities. It encompasses the natural environment, the Earth, the wilderness, as well as forests, oceans, rivers, coastlines, the living environment, the geology and the geography.

More than 90% of Cambodians are Buddhists, and the Cambodian culture is also influenced by Hinduism (Marston, 2004). According to a dominant Cambodian view (Kouy, 2014), nature does not belong to the people, but it is offered to them as a gift. Therefore, they should not kill or destroy any living things (e.g., animals or plants). This view contrasts with the nature-culture or forest-agriculture dichotomies of the narrow understanding of nature. As Ironside writes in his paper on conservation in Cambodia: "Throughout Southeast Asia the very idea of a protected area free from human use and impact (…) is largely a foreign concept" (Ironside, 2015, p. 203).

Indonesian. In Indonesia, the word used to translate nature is "*alam*", which means everything that exists in the skies and in the earth (e.g., stars, forces, earth and its resources). The word *alam* when paired with other words can evoke other meanings. It can refer to something that is not human-made or free from human intervention (e.g., *sumber daya alam*, *bencana alam*) or to a place where humans cannot live like "*alam gaib*", which refers to the non-human spiritual world (Indonesia Ministry of Education and Culture, 2021). The word *alam* is often associated with nature with minimum (though not none at all) human intervention. Images such as forests and mountainous areas with villages and paddy fields could depict the word *alam*, but people do not associate the image of big cities with the word *alam*—even though they have green areas. In the term *alam* humans exist but do not overpower it.

The word *alam* is rooted in Malay language and can be traced back further to its Arabic origin ('*ālam*). The Qur'an mentions the word '*ālam* several times, as well as several other words to refer to nature, environment and its related objects. The prominent phrases are *Rabbun al-'alamin* to describe God as The Lord (creator, owner, keeper) of the Universe, and *Rahmatan lil 'alamin* as the mission of Islam, which means compassion for all creation. The universe here includes all species, all creations and all types of worlds—natural and supra-natural. The Qur'an also uses some descriptions of natural phenomena as signs for humans to take lessons and wisdom from (e.g., the rain, position of the moon and the sun, animal behavior, the seas, etc.) (Alshahrani, 2020).

While the word *alam* is used in the national language and widely used in the local language of ethnic groups in western part of Indonesia like Sumatra, Java and Kalimantan, other indigenous groups have their own word for nature. Moreover, interestingly, the word *alam* is rarely used in Indonesian laws and policies. The laws and policies usually only use *alam* when referring to natural resources. The terminology that is usually used is "*lingkungan hidup*", which is the translation for "(living) environment". "*Lingkungan hidup*" is defined as an integral space with all the things, resources, climatic and environmental conditions, and living creatures including humans and their behaviors that affect the nature, the continuity of livelihood, and the welfare of human beings and other living creatures.

Filipino, Tagalog, Cebuano, and Lumad. In Filipino—the national language of the Philippines[4] mostly derived from the Tagalog language and mainly spoken in the island of Luzon—the main linguistic expression of "nature" or "environment" is *kalikasan*. It came from the Tagalog adjective "*likas*", meaning

"natural" and "*ka*", meaning "with/together with", or "companion". The word *kalikasan* literally means "together with nature", or "one with nature", and "*likas*" could also mean pure and natural. When applied to the environment, it can signify untouched by human hands. Davide (2012) refers to *kalikasan* as "the natural elements of life of land, air, and water". Furthermore, Davide suggests that "life sources" is a more accurate interpretation of *kalikasan*.

While Tagalog is mainly spoken in Luzon, the main language in the Filipino islands of Visaayas and Mindanao is Cebuano. In Cebuano, *Kinaiyahan* means "natural world" or "natural environment", which is generally associated with "Mother nature" and God's creation. It is derived from the Cebuano word "*kinaiya*", which refers to "traits", "behavior" or "characteristic". "Kinaiya" can be either good or bad, and is generally attributed to human beings as they are presupposed to be the only ones capable of moral discernment. Hence, the term *kinaiyahan* connotes a more anthropocentric label as it refers to human traits. According to Fernández, through their relationship with *kinaiyahan*, the farmers "understand the notion of peace in relation to their work that is dependent on the earth's capacity to make their plants and crops grow and bear much fruit" (Fernandez, 2019). Farmers' obligation to reciprocate the gift of nature is reflected in the expression: "*pagbulig sa tawo sa kinaiyahan*" (human beings support and care for the environment).

While there are very few philosophical works produced regarding the conceptualization of "nature" in the Philippines, researchers from Mindanao recently engaged in field work in the *Lumad* communities in order to extract what they believe is an indigenous Filipino philosophy based on the worldviews, beliefs, spirituality, and culture of the *Lumad*. In *Lumad*—a third indigenous language used in the Philippines by the Manobo Indigenous Peoples of Mindanao—the terms *puwaa-son* and/or *kulaw-wan* are used to refer to "environment" or "nature". Owing to their close affinity with the land, the *Lumad* have a rather cosmological approach to "nature" or "environment". Nature and creation should not be detached from the story of the universe "in which indigenous Earth wisdom evolved out of an intimate relationship between Earth and its people" (Fangloy et al., 2015). For the *Lumad*, land is life itself: we do not own the land, the land owns us. This also means that the land is sacred as it is the dwelling place of the unseen spirits and is therefore "alive and a source of life" (Fangloy et al., 2015).

Key messages for global environmental science-policy initiatives

A first contribution of this article is descriptive: it unveils a non-exhaustive panorama of some of the conceptualizations of nature in East and South-East Asia (see Table 1). In contrast with the narrow understanding of "nature" characterized by the dichotomies natural/artificial, nature/culture, human/nature, in the cases analyzed in our panorama, these distinctions exist in some forms, but are much less rigid and intertwined with many bridges to connect humans and non-humans by correspondence and analogies (Bruun and Kalland, 1995). Global discourses that tell the story of humans "waging a war on nature" make sense mainly within the frame of the narrow understanding of "nature". Yet, in many contexts and worldviews, other categorizations are used to discuss the human-nature relations than these narrow and dichotomous concepts of humans and nature. Different categories appear repeatedly across our panorama about the conceptualizations of nature. One recurrent question relates to the origin and existence of things (how did "it" came into the world), with the

connotations of spontaneity (e.g., Japanese "*jinen*"), and expressions such as "as it is" (e.g., Burmese). Another recurrent aspect is the relations between different worlds and the place of humans among these different worlds, such as the world of gods, the material world, the world of animals, etc. (e.g., Burmese, Nepali). Different aspects of the narrow understanding of "nature" can be categorized into different worlds that co-exist like layers. What is excluded from or included in each of these categories varies. In such a view, the narrow understanding of "nature" could be understood as the material world that excludes humans, their doings, and spiritual beings. Finally, Aris' remark that "it is impossible to disentangle what the people of the Buddhist Himalayas think about the natural world, about plants and animals, from what they think about themselves" (Aris, 1990, p. 99) can probably be widened to worldviews beyond the Himalayas (Han, 2006). In the same way, the "Western" dichotomies of the narrow understanding of nature appear to reflect other hierarchical dualisms that serve to justify social power structures such as the mind-body, spirit-matter, or even man-woman dualisms (Plumwood, 2002). If that is the case, then it is crucial to be aware of the nuances of the conceptualizations of nature in different worldviews, because far from being neutral, they can echo hierarchical social categorizations.

This article also raises the question how differently would environmental policies and reports be drafted if they would take into consideration this diversity. Of course, the usage of a single word and idea, such as the narrow understanding of the English "nature", is useful and needed for intercultural and multilingual debates and agreements to take place. Yet, the fact that the usage of "nature" is so widely spread should not conceal the diversity of connotations it takes in each context. The difficulty to have a consensus around the meaning of nature, reflected in this paper and more widely in debates in international environmental policy-making precisely shows the diversity of conceptualizations. The way out is not to reject and abandon the use of a common ambiguous word such as "nature" because it has diverse connotations and understandings (Brugnach and Ingram, 2012). Instead, we suggest that there is a need to balance the two approaches. First, it is necessary to build an inclusive and mutual understanding around some key concepts such as "nature" to foster dialog in high-level environmental governance, as well as at different scales in multilingual and multicultural contexts. The current usage of the word "nature" in its narrow meaning could be seen as the result of successful intercultural exchanges to build a common vocabulary, *as long as* the diversity of interpretations and meanings it encapsulates is not ignored and forgotten. Second, this general—and probably unavoidably ambiguous—understanding of "nature" *needs* to be interpreted and adapted to the local sociocultural worldviews when applied in local contexts. We suggest that taking into account the diversity of meanings of nature could improve the acceptability and efficiency of environmental policies in each context, as well as internationally. This joins a chorus of calls for sustainability solutions to be designed for specific contexts as they can hardly be universalized (Ostrom, 2008; Hulme, 2010). Here, we highlight that this need for "design for contexts" is not limited to physical, institutional (Ingram, 2013), and social (Brugnach et al., 2021) factors, but also includes conceptual and cultural aspects.

Likewise, more inclusion is needed in the knowledge-making and decision-making processes at all scales, not only of Indigenous people and local communities (Dewulf, 2005; Smith and Sharp, 2012), but also of traditions of thought and cultural approaches that are widely set aside at the global English-centered science-policy interface. Engagement with diverse knowledge, knowledge-making processes and knowledge systems can lead to better decisions about sustainability (Barrett, 2013), and this requires the direct involvement of diverse knowledge holders (Brugnach et al., 2017), such as scholars from diverse traditions. Sources and knowledge that is kept and developed in forms and languages other than academic publications in English can be made accessible and conceptually translated by involving scholars and practitioners of diverse traditions. Not only scientists and official representatives from diverse sociocultural backgrounds need to be included, but also humanities scholars of different traditions who are experts regarding the conceptual, ontological, cosmological and ethical intertwining of ideas.

Conclusion

We explored diverse definitions and connotations of conceptualizations of nature from East and South-East Asia that tend to be invisible in environmental policies and reports at the global level. The voices of many sociocultural groups tend to be muffled in international science- and policy-making, or they are quickly summarized and tweaked within the imposed frames of the dominant narrow understanding of nature. Yet, this paper shows that these conceptual subtleties are relevant and dissonances in the conceptualization of nature often hide wider and deeper cosmological, ontological and ethical mismatches. Instead of closing the dialog around a narrow concept of nature, maybe environmental negotiations would be more fruitful if the dialog regarding the design and choice of the conceptual frames themselves would be open to other voices.

Given the political, social and cultural importance of East and South-East Asia for international environmental governance, this paper could help international expert groups to integrate more non-occidental knowledge and expertize in high-level environmental governance initiatives. To be integrative, the paper went beyond the narrow term of nature, examining related environmental and cosmological representations. The method combined successive exchanges with diverse native or local experts including online meetings and comparisons, as well as reviews of literature and sources in the primary languages, further confirmed by secondary literature in other languages. Thus, the diversity and multiplicity of exchanges between experts from each tradition increased the possibility to explore rigorously the meanings of the concepts used to translate and capture the narrow understanding of "nature".

To conclude, we suggest first that these diverse voices need to be represented in global reports on sustainability, and this can be fostered by the direct involvement of experts from diverse traditions of thought who have access and interpretative knowledge of sources in languages other than English. By presenting a brief and far from exhaustive panorama of some of the conceptualizations of nature in East and South-East Asia, this paper aimed at showing the depth and complexity of the nuances and at opening the door for future work greater in scope and depth. Second, solutions and policies on the ground must be designed based on the local conceptual frames. To take into consideration the diversity of conceptualizations of nature can lead to better decisions about sustainability and improve the acceptability and efficiency of environmental policies in each local context, as well as internationally.

Data availability

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

Notes

1 For instance, the hashtag #ForNature accounted over 400,000 interactions on social media platforms (Twitter, Facebook, and Instagram) in the week of June 30th–July 6th 2021. The slogan was translated into the six UN languages (Arabic, Chinese, English, French, Russian, Spanish), but is mostly used in English, sometimes including the English term when the main text is in another language.

2 https://unfccc.int/news/un-secretary-general-making-peace-with-nature-is-the-defining-task-of-the-21st-century and https://www.un.org/press/en/2021/sgsm20959.doc.htm

3 Harbsmeier (2010) proposed a non-inclusive reading of *zìrán* in Laozi. However, in his explanation, he overlooked a key point: who was the intended reader of Laozi as a text of the pre-Qin period? In the pre-Qin period, most of the people who could read and write were rulers, and therefore, *Laozi* is a book for those rulers who ruled peasants. When the ruler class ("I") said they are *zìrán* (Chap. 17), they did not mean that their existing way of life is "not man-made", but that they are "free from the interference of the rulers" and "complete" or "decide" by themselves. The "nature" in Laozi basically expresses a similar meaning, for example, in Chapter 64 "Supplementing the *zìrán* of All Things" (輔萬物之自然) means that the people have their own way of life, and the ruler should help them, not change them. In short, *zìrán* in the pre-Qin texts should be interpreted as "free from external interference", which mostly refers to "rulers" rather than "human beings". For a more detail discussion, please see (Jiang, 1971 p. 113).

4 According to (McFarland, 2004), there are more than 100 regional languages in the Philippines. To address the need for a national language for sociopolitical and sociocultural reasons, the 1987 Constitution of the Philippines identified Filipino as its official lingua franca (Atienza, 1994). The Filipino language is predominantly based on Tagalog, the "language of the capital" (Panganiban, 1952), although the Constitution noted that it is open for contributions from other regional languages.

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The authors declare no competing interests.

Ethical approval

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Additional information

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