An Ecocritical Reading of Hayao Miyazaki's *Nausicaa of the Valley of the Wind*: Territory, Toxicity, and Animals

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Abstract

Nausicaa of the Valley of the Wind (1984) is an animation written and directed by Hayao Miyazaki. Set in the future a thousand years from now, the story deals with the struggle of a princess of the Valley of the Wind to maintain the peace and livelihood of her homeland against the invading nation Torumekia and the expansion of the lethal Toxic Jungle. Yet beyond the fantastic encounters with giant insects in the Jungle and an adventure in a glider and fighter aircraft there are profound ecological messages that expose the vulnerability of the natural world as much as of its human habitats. This article scrutinizes the film with respect to the four main areas central to ecocritics' concerns: (1) the concept of landscape, involving the depiction of pastoralism, wilderness, and sublime spaces and their implications; (2) the question of land entitlement; (3) toxicity and toxic discourse; (4) animals, especially insects, as these species are threatened by toxicity through insecticides. The article both engages with and relies on several fundamental sources in environmental criticism, most notably Rachel Carson's *Silent Spring* (1962), Lawrence Buell's "Toxic Discourse" (1998), and Greg Garrard's *Ecocriticism* (2012). Before closing, the article attempts to critique the film as a quintessential ecological masterpiece and explains how this fictional anime could still be extremely relevant to the current global environmental crisis even though three decades have elapsed since its production and its first screening.

Keywords: ecocriticism, environmental literature, *Nausicaa of the Valley of the Wind*, Hayao Miyazaki, environmental Japanese animation

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บทศึกษาภาพยนตร์อนิเมชันเรื่อง *มหาสงครามหุบเขาแห่งสายลม* ของ ฮะยะโอะ มิยะซะกิ ผ่านมุมมองนิเวศวิจารณ์ ว่าด้วยเรื่องอาณาเขต สารพิษ และสัตว์

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บทคัดย่อ

มหาสงครามหุบเขาแห่งสายลม (2527) เป็นภาพยนตร์อนิเมชันที่เขียนและกำกับโดย ฮะยะโอะ มิยะซะกิ เกี่ยวกับโลกหลายพันปีในอนาคต เป็นเรื่องเกี่ยวกับเจ้าหญิงนอซึกะแห่งอาณาจักรหุบเขาแห่งสายลม ซึ่งดำรงอยู่อย่างสงบสุขและอุดมสมบูรณ์มาตลอด แต่กำลังถูกคุกคามจากอาณาจักรใกล้เคียง คือ โทรุเมเคีย (Torumekia) ซึ่งมีความพร้อมด้านการรบพุ่งและต้องการขยายอาณาเขต อีกทั้งยังถูกคุกคามจากป่าแห่งสารพิษ (Toxic Jungle) ซึ่งเต็มไปด้วยสายพันธุ์พืชและแมลงอันเป็นพิษต่อมนุษย์ เบื้องหลังเรื่องราวการผจญภัยอันน่าตื่นตาตื่นใจ การเผชิญหน้ากับแมลงยักษ์และการเหินเวหาบนเครื่องร่อนและยานบิน ภาพยนตร์เรื่องนี้สอดแทรกข้อคิดเชิงนิเวศวิทยาที่เผยให้เห็นความเปราะบางของทั้งโลกธรรมชาติและถิ่นที่อยู่ของมนุษย์ บทความนี้วิเคราะห์ภาพยนตร์อนิเมชันนี้ในสี่ประเด็นที่เกี่ยวข้องกับการศึกษาวรรณกรรมเชิงนิเวศและสิ่งแวดล้อม ได้แก่ (1) แนวคิดเรื่องภูมิประเทศ ซึ่งเกี่ยวข้องกับขนบการบรรยายท้องทุ่ง (pastoralism) พื้นที่รกร้าง (wilderness) พื้นที่สูงส่งหรือเลอเลิศ (sublime) และนัยของพื้นที่เหล่านั้น (2) คำถามเรื่องสิทธิ์การถือครองที่ดิน (3) สารพิษและวาทกรรมสารพิษ (4) สัตว์ โดยเฉพาะแมลงซึ่งเกี่ยวข้องใกล้ชิดกับสารพิษผ่านยาฆ่าแมลง บทความนี้อ้างถึงและพยายามสานต่อการศึกษาชิ้นสำคัญในสาขานิเวศวิจารณ์หลายชิ้น โดยเฉพาะ *Silent Spring* ของเรเชล คาร์สัน (2505) “Toxic Discourse” ของลอเรนซ์ บิวเอลล์ (2541) และ *Ecocriticism* ของ เกร็ก การ์ราร์ด (2555) ในตอนท้ายบทความนี้ยังวิพากษ์ภาพยนตร์เรื่องนี้ในฐานะงานภาพยนตร์ชิ้นเอกที่ชูประเด็นสิ่งแวดล้อม และพยายามอธิบายว่าอนิเมชันที่เป็นเพียงเรื่องแต่งและได้รับการฉายครั้งแรกตั้งแต่กว่าสามทศวรรษที่แล้วนี้มีความเชื่อมโยงต่อวิกฤติสิ่งแวดล้อมในโลกปัจจุบันอย่างยิ่งยวดเพียงใด

คำสำคัญ นิเวศวิจารณ์ วรรณกรรมสิ่งแวดล้อม *มหาสงครามหุบเขาแห่งสายลม* ฮะยะโอะ มิยะซะกิ อนิเมชัน สิ่งแวดล้อมของประเทศญี่ปุ่น

1. Introduction

Nausicaa of the Valley of the Wind (1984),[1] written and directed by Hayao Miyazaki, reveals a world we would imagine existing only in fantasy fiction. In the first scene, a deserted village is anything but ordinary—the ground and all the trees are covered with strange, dense webs that constantly send off purplish spray. The air is filled with floating white pellets similar to snow. The traveler visiting this village rides on a horseclaw, a large ostrich-like creature. Both the rider and the horseclaw wear gas masks. Inside the hut he enters are run-down furnishings deeply covered by white fungus webs, with a few human skeletons at a corner. The only living things in this village are hideous insects similar to gigantic dragonflies swarming across the sky, making disturbing and threatening noises. Without saying, the village is unnatural and dangerous. The traveler, mounting his vehicle, says, "Another village dead. Let's go. Soon this place too will be consumed by the Toxic Jungle."[2] The very first scene thus introduces the central concern of this animation: the serious ecological threat to humanity in the form of pollution. However, as the story develops, audiences are bombarded with several complicated issues from the internal instability of the Valley of the Wind, which is the main locale of this story, military intervention from outside, and the ongoing struggle between human society and the natural world. Up until now criticism of *Nausicaa* has been mostly devoted to the emergence of Japanese anime in the Western world, artistic and technical challenges in the film's production, the religious symbolism of the film, and above all the empowered character of Nausicaa as a complex heroine in the patriarchal Japanese society; whereas the topics of ecology and environment have been mentioned only generally. This article, therefore, aims to reappraise the animation through the ecocritical approach and examine three key subjects of territory, toxic discourses, and animal representations, in order to find out how successfully the writer-director Miyazaki has

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[1] *This essay will discuss only the anime version of* Nausicaa of the Valley of the Wind. *Readers who are interested in Miyazaki's manga of the same name, serialized in the periodical* Animage *between 1982 and 1994, are advised to refer to Andrew Osmond's "Nausicaa and the Fantasy of Hayao Miyazaki" (1998) and Helen McCarthy's* Hayao Miyazaki: Master of Japanese Animation *(1999).*

[2] *All dialogue and subsequent illustrations are taken from the film* Nausicaa of the Valley of the Wind, *written by Hayao Miyazaki, produced by Isao Takahata, and translated by Cindy and Donald Hewitt.*

visualized and exploited the natural world to deliver ecological messages. While trying to draw a larger academic audience to environmental animation, a genre usually slighted as childish, the article will also show the film's relevancy to today's world by relating details in this story with ecological crises of the late twentieth century and the early twenty-first century.

Picture 1: Lord Yupa enters the deserted village where toxicity is made visible and oppressive at the beginning of the film.

For those who have not watched the film, *Nausicaa of the Valley of the Wind* is set a thousand years after the collapse of industrialized civilization in the Seven Days of Fire, a war fought by biochemical giant warriors equipped with a limitless fire weapon that has almost wiped out the world's human population but instigated an expansion of the Toxic Jungle or the Wasteland. Nausicaa, the protagonist, is the princess of a kingdom in the Valley, which has so far escaped destruction because of a strong wind that perpetually keeps the village free from toxic penetration. However, the sudden arrival of an aircraft in the middle of the night brings havoc to the Valley since this craft is full of contaminated insects. Held hostage inside is the princess of Pejitei, a nation destroyed by a warring kingdom called Torumekia under the leadership of Kushana. This female warrior Kushana covets the recently-discovered fetus of one ancient God Warrior, of which she plans to make use against insects in the Toxic Jungle in order to reclaim the land and create an insect-free human community. Nausicaa, however, is appalled

by the idea as she has always held that the insect and human worlds should co-exist, especially after she finds that under the floor of the Toxic Jungle is a pure, vast cavern where plants die, fossilize, and produce clean sand and water that sustain human beings above. The situation becomes critical as the Valley is being seized by Kushana, who tries to revive the God Warrior there. To take revenge, the Pejitei army makes use of the formidable Ohmu, giant bugs with ferocious strength. By carrying a mutilated baby Ohmu across the Sea of Acid to the Valley, the Pejitei succeeds in incensing the Ohmu herd and making them stampede to the Valley, while Kushana has just succeeded in incubating the God Warrior to rise up against them. It turns out that the God Warrior can only last a few blazing emissions before he collapses; while Nausicaa, badly hurt from a previous fight, rushes with the bleeding baby Ohmu in front of the herd to stop them. Suddenly the swarm of raging Ohmu stops short and becomes calm from a psychic awareness of Nausicaa's gentle love for all beings. They extend their antennas to heal Nausicaa and form a glowing yellow grassland, corresponding to the prophecy at the beginning of the story of a savior in blue rope standing in the golden field. Thus the story closes with pictures of the Ohmu gradually returning to the Jungle, Kushana's fighter aircrafts and tanks peacefully leave, and the Valley undertakes a reforestation program to restore the three-century-old forest near the village that has been burned down during the invasion.

2. Landscape

Ecocriticism, defined as "the study of the relationship between literature and the physical environment" (Glotfelty, 1996, p. xviii), is particularly interested in the landscape and the role of settings in a literary work more than any other fictional elements. As with many texts dealing with ecological system and problems, *Nausicaa*'s portrayal of the physical environment is complicated. Settings in this film are not just static backdrops but are complex and ever-changing, and they constitute a significant part of the film's conflicts. In "Meadow and Apocalypse: Constructions of Nature in the Early Works of Miyazaki Hayao," Viktor Eikman (2007) contends that the setting of this film is rendered vague: "[t]here are no reliable indicators as to where on Earth the narrative takes place, except a broadly temperate climate. Some states use scale armour and a

feudal system while others are closer to the technology and politics of World War I… There are entire lakes full of powerful acid in the Wasteland around the Valley of [the] Wind, superficially a peaceful green oasis and first introduced as a relaxing occasional retreat for an old traveller" (p. 42). In terms of time, although at the start the voice-over reveals that it is a thousand years in the future, people's ways of life and technologies more closely resemble those of the past. In terms of place, the setting could be roughly drawn in a dichotomy of the Valley or the green oasis, and the dangerous worlds surrounding it, although this reductive simplicity would not hold very well on closer inspection as this article will show. A number of critics describe the Valley according to the traditional trope of pastorals, for example, it is "intensely agricultural… though apparently… diverse and fully or nearly vegetarian, a positive scenario for many environmentalists" (Eikman, p. 46). It is a "peace-loving backwater" (Loy and Goodhew, 2014, p. 68), or a "fiefdom as an idealized cooperative agrarian society" (Hairston, 2010, p. 175). Most vividly, Andrew Osmond (1998) describes *Nausicaa*'s Valley as a pastoral ideal—"a European idyll: protected from decay by fresh sea-breezes, [with] its meadows, windmills and medieval castle," but it is at the same time fragile since the village ruined at the beginning of the film could have been "a similar haven, once prosperous, now destroyed by the all-invading rotwood."

To me the Valley is thus idyllically represented because it stands for a valuable, idealistic combination of nature and culture. The village's sources of energy are a series of wind turbines and windmills scattered around the village, promoting clean, renewable energy that is highly sustainable. Once the traveler, revealed to be Lord Yupa, Nausicaa's mentor-uncle, reaches the Valley, the two exhausted horseclaws take a drink from a lake surrounded by the green forest. A frog is swimming in the clear water and birds are chirping as the light-hearted music runs through the whole scene. The images of peasants working happily on the farm, children greeting Lord Yupa joyously along the rolling green fields, and abundant grape orchards constitute a picturesque, rustic scene.

According to Greg Garrard's *Ecocriticism* (2012), this trope of "bucolic idyll" emerged during the large-scale urbanization in the Hellenic period. One element that is usually highlighted in the pastoral tradition is the difference "between town (frenetic, corrupt, impersonal) and country (peaceful, abundant), and the temporal distinction of

past (idyllic) and present (fallen)" (p. 39). Indeed the Valley, which mostly relies on an agrarian economy in contrast to industrialized urbanism, has both the idyllic and nostalgic elements typical of the pastoral tradition. As to the reason why this specific trope is so fully elaborated, Helen McCarthy (1999) suggests that "[t]he scenery of the lush, peaceful Valley of the Wind and the devastated lands nearby create a fascinating contrast" (p. 78). So much is obvious—the image of the Valley is juxtaposed with the unfriendly worlds elsewhere that seem ready to encroach upon it.

What critics have so far overlooked, however, is how the pastoral tradition could contribute to the efficiency of the toxic discourse which is a central concern of this story. In this analysis I am indebted particularly to Lawrence Buell who, in his essay "Toxic Discourse" (1998), explains how success of several arguments against toxicity, especially by environmental justice activists, depends heavily on pastoral depiction. By pressing on the "conviction that the biological environment ought to be more pristine than it is, ought to be a healthy, soul-nurturing habitat,... it makes sense for toxic discourse to enlist pastoral support. It inverts and democratizes the pastoral ideal: a nurturing space of clean air, clean water, and pleasant uncluttered surroundings that is ours by right" (p. 648). In *Nausicaa* the powerful imagery of rolling green fields, despite being highly anthropocentric rather than ecocentric, commends pastoralism as a favorable, if not *the only legitimate*, mode of living for dwellers on earth. The film even subtly associates a higher moral quality with the pastoral mode of living. Because the Valley is abundant in resources, people there are friendly and peace-loving, in contrast to the competitive and aggressive war-mongers outside. Moreover, by presenting the Valley from within the pastoral tradition, Miyazaki helps transforming the place into a valuable yet fragile community that heightens Nausicaa's noble sacrifice to protect it in the end.

Picture 2: The Valley of the Wind is an exemplar of idyllic-pastoral depiction for a few important reasons.

As mentioned earlier, the settings of this film are usually regarded as two separate spheres: the opposite of the Valley is the Toxic Jungle and the Sea of Acid that surrounds it. Eikman (2007) refers to this new ecosystem dominant on the planet by its Japanese name, *fukai*, literally a sour or rotting sea of decay, which "symbolically invokes wilderness while also connecting the vengeance of an oppositional wild nature with apocalyptic toxic discourse." Citing Garrard, Eikman suggests that "the *fukai* certainly looks different from any real natural life, but its alien appearance and poisonous aura serve mainly to embody and refine the original symbolism of the wild, conceived as a dangerous contrast to the known world of Neolithic civilization" (pp. 42-3). At first glance, the identification of the Toxic Jungle as wilderness sounds logical, given its mysterious and dangerous qualities and given that it has never been affected by human civilization in any way. However, doing so would still lead to complications on many levels. According to Buell in *The Future of Environmental Criticism* (2005), wilderness, by definition, connotes the sense of the "undomesticated" in a spatial area, but imaginatively could also be a quality more than a location—as the eco-poet Gary Snyder says, wilderness is arguably "everywhere: ineradicable populations of fungi, moss, mold, yeasts, and such that surround and inhabit us" (qtd. in Buell, p. 148). Peter Barry (2002) tries to be specific and clear-cut by dividing the outdoor environment into four

categories—the wilderness, the scenic sublime, the countryside, and the domestic picturesque—but can not help stressing the lack of an absolute quality of nature and culture of each type. So while each area is favored by different modes of writing or groups of writers, there is actually no such thing as "pure nature" because even "the wilderness is affected by global warming, which is cultural, and gardens depend on sunlight, which is a natural force" (pp. 255-56). Devoting a chapter of *Ecocriticism* to the wilderness trope alone, Garrard (2012) explains that

> [t]he idea of wilderness, signifying nature in a state uncontaminated by civilization… is seen as a place for the reinvigoration of those tired of the moral and material pollution of the city. Wilderness has an almost sacramental value: it holds out the promise of a renewed, authentic relation of humanity and the earth. (p. 66)

These scholars' arguments are quoted at length because they show the extent that the concept of wilderness could be problematic when assigned to *Nausicaa*'s undomesticated areas. On the one hand, the depiction of the Toxic Jungle partly corresponds to wilderness in Garrard's sense, as a spiritual or aesthetic space fit for contemplation and revelation, but at the same time it is a horrifying and savage territory. These can be seen at the beginning when Nausicaa loiters in the forest that is so rich, alive, and fascinating; and later in the scene she and Asbel, the prince of Pejitei, are chased by predatory giant insects. On the other hand, the Toxic Jungle and Sea of Acid are far from wilderness as a "pure" space free from human activities, urban development and pollution, because they are utterly deformed and polluted places. The representation of wildness in *Nausicaa* is perhaps even more paradoxical because its abundance is largely maintained by contamination in the form of abject pollution, so that by being uninhabitable for humans the wilderness protects itself and thrives. Now even though we agree with other critics and see the Toxic Jungle as a wild space, there still is the second problem that involves the role of human beings in wilderness. Garrard (2012) suggests that the ideal wilderness should be "pure" or free of humans, but to depict such an ideal, the narrative must posit "a human subject" precisely there. Not just any human subject either, wilderness betrays a hierarchical ideology because wild experience often betrays "identification with privileged leisure pursuits" as one could well imagine that "high-tech composite surfboards, eighteen-

speed bicycles, or sophisticated hang gliders" are not available options for "nomadic grub eaters" (Timothy Luke qtd. in Garrard, pp. 78-9). In *Nausicaa*, the Toxic Jungle exists quite independently of humans, yet it cannot avoid being exploited by Nausicaa, who not only rambles and collects live specimens for her scientific experiment there but also seeks spiritual sanctuary and redemption from this space. These activities are available for her as a princess with a jet-powered wind glider, sample collecting sets, and, above all, leisure at hand. Also, considering Richard Kerridge's (2006) observation about wilderness that "wild places provide solace for exiles, release for repressed and outlawed feelings, and space for adventurous forays beyond restrictions of law and domesticity" (p. 532), Nausicaa's exploration of the Toxic Jungle and her frequent journeys between the forest and the Valley could be seen in a new light. Despite the fact that wilderness is traditionally considered a masculine space and all the activities mentioned above are primarily male-oriented, in this film it is the heroine's escape from a patriarchal society which holds that, as the old servant Mito says, a good girl is not expected "to run around" or "to play in the Toxic Jungle." The forest thus stands for a chance of freedom, which only such a wild space could offer for a woman. Apart from that, wilderness—the first area of the four categories of Barry (2002)—is a preferred backdrop "for epic and saga, which centre on relations between human beings and cosmic forces… [It is usually] entered as if instinctively by those who would 'find' themselves," such as Moses and Christ (pp. 256-7). This categorization of settings could lend more weight to the interpretation of Nausicaa as more than just an ordinary princess. While many critics see her as a "Princess Messiah" (McCarthy, 1999, p. 72; Eikman, 2007, p. 47) from her praiseworthy act of devotion to save humankind, her intimate association with the Toxic Jungle also elevates her to the higher status of a spiritual female leader rarely found in traditional narratives.

While it could be convenient to simply separate the settings of *Nausicaa* into a dichotomy of the green Valley and the bluish-purplish worlds elsewhere, by doing so one might turn a blind eye to the variations of landscape which could be equally thought-provoking. In fact, apart from the two predominant sites of the pastoral Valley and the uninhabitable Toxic Jungle, two other scenes point toward another space in the interest of ecocriticism—that is the sublime, a manifestation of wilderness most

celebrated in the Romantic period. The first scene is right after the title song ends, as Osmond (1998) puts it—"The first five minutes of the film are almost wordless as the viewer shares Nausicaa's contemplation of an alien earth." This is when Nausicaa explores the edge of the Toxic Jungle in a quiet, meditative manner and lies down with spores slowly falling down from above and the giant transparent shell of an Ohmu beneath her. The second scene has been noted by Eikman (2007)—"[i]n the middle of the film, Nausicaa drops through quicksand to a sublime cavern under the *fukai*" (p. 46). In this revelation scene Nausicaa gradually takes in her appreciation of the sublimity of the earth's self-cleansing ability. She later lies down on a circle of fine sand and sheds tears of happiness among magnificent tree trunks that constitute the lofty subterranean hall. These scenes, I think, are important to the discussion of *Nausicaa*'s setting, especially when the artistic and visual presentation seems to highlight their significance. One might, for example, notice that an astonishing amount of time is devoted to still, long shots of the two landscapes mentioned. In both scenes the human figure is small, making a humble, prostrating gesture beneath the world's larger and much more fascinating order. The feeling of awe that almost touches upon horror[3] is outstanding. An overwhelming sense of astonishment is aroused by darkness and shadows, amid shafts of light from above and the majestic grandeur of the spaces, all of which enhance their sacredness and invoke the feeling of reverence and wonder in viewers. Besides these two moments of the scenic sublime, the last category that has never been mentioned by any critics of *Nausicaa*, possibly because it is very brief, is the "brownfield" which I have described in detail at the beginning of this essay. The term generally refers to "toxic sites, the opposite to affluent suburban and exurban 'greenfield'" (Buell, 2005, p. 135). Although the word is used primarily to describe anthropogenically degraded landscapes, particularly in urban and industrial zones, the opening scene of *Nausicaa* bears a striking similarity to the brownfield scenery of Love Canal which Buell (1998) describes in "Toxic Discourse."

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[3] *According to Garrard (2012), sublime by definition refers to an aesthetic concept beyond the picturesque landscape—"[t]he beautiful is loved for its smallness, softness, delicacy; the sublime admired for its vastness and overwhelming power… the passion caused by the great and sublime in nature… is Astonishment; and astonishment is that state of the soul, in which all its motions are suspended, with some degree of Horror" (p. 71).*

This community in Niagara Falls, New York, was disrupted by a shocking contamination of toxic waste—"The most frequent, most persistent images… were of community lands (school yard, suburban field, backyards) that ought to be green, vibrant with suburban/domesticated vegetation, but instead show only sparse, half-dead plant cover, punctuated with holes filled with unnatural-looking chemical soup; house yards and basements invaded by chemical ooze" (p. 646). The application of these particular images will be elaborated later in my discussion of toxicity.

3. Land Entitlement

The next topic that would occupy the minds of ecocritics is closely related to territory and place, i.e. land entitlement. The problem has been quite a pressing issue in the field of environmental management. However, since this topic is overshadowed by other environmental problems, nobody has discussed it in relation to this animation before. The question over rights to possession of lands is a fundamental question of environmental ethics that, on the one hand, seems to move closer toward human culture and further from natural environment, but on the other hand is deeply engaged with the forest and the exploitation and preservation of the non-human. A simple question like "who can claim land and how to evaluate the legitimacy of such a claim" is never simple in practice. To this question Graham Huggan and Helen Tiffin (2010), eminent scholars in postcolonial ecocriticism, recommend a thorough consideration of the communities' sense of cultural identity and affective connections to land as well as one's legal title to it (Vadde, 2011, p. 569). Basically speaking, land entitlement "operates as a legislative mechanism for the recognition of affective ties to land and place that are confirmed by historical continuity of association" (Huggan and Tiffin, 2010, p. 82), in which case the people in the Valley of the Wind who have deep emotional attachments as well as genealogical claims to the land should be granted full rights and entitlements to the Valley. Yet in several instances the aesthetic or communal bonding is not only abstract but also useless against political and military invasion, as in *Nausicaa*'s case. Loy and Goodhew (2014), focusing on the spiritual dimension, assert that all major characters in *Nausicaa* are driven by the desire for revenge—Kushana "seeks revenge on the Ohmu-creatures who have maimed her… Prince Asbel is also motivated by

revenge… against the Tolmekians responsible for the death of his sister in an aircrash [whereas Nausicaa] flies into a rage when the Tolmekians kill her father King Jhil" (pp. 68-9). Nevertheless, from a different perspective with land entitlement at the center, it is undeniable that at least Kushana and Asbel, heads of two out of the three nations in this story, covet more lands and want to reclaim the Toxic Jungle from the insect population. In the middle of the story, a fighter of Pejitei detains Nausicaa to prevent her from disrupting their plan, telling her that once they get the God Warrior back from Torumekia—"We'll burn the Jungle and take back the earth." Similarly, Kushana says to Lord Yupa, "the insect must be stopped. You must revive the Warrior and use it to destroy them and their Jungle." It seems that the only way humanity could regain the Wasteland is through the God Warrior's fire, because as we can see toward the end of the film, human beings do not stand a chance against the raging herd of gigantic insects. Even so, it remains clear that even if the two nations were to succeed in burning all the insects, neither of them would have the capacity to glean any resources from the Toxic Jungle. The air would remain poisonous, the water undrinkable, and the climate unfit for human survival. Even worse, if Nausicaa's theory is correct, they would also lose the last source of pure water from the well, so far produced by the trees in the Jungle, which is in turn protected by the insects.

Such is the ecological dependency conveyed in this film, but what do all these have to do with violent struggles for land? To begin, things would look very differently if one perceives the armed conflicts in *Nausicaa* as a form of imperialism—a strong warring nation like Torumekia cannot be distinguished from a hegemonic state with a desire to conquer the world. By invading Pejitei, the Torumekia succeeds in stealing the God Warrior, the most precious and dangerous resource on earth, not unlike a nuclear weapon in its powerful radiation of fire and its potential to cause mass destruction. Nevertheless, the lands beyond the dense forests remain impregnable to intruders. Indeed, the image of the Toxic Jungle could remind one of the African continent during the nineteenth century, which Alfred Crosby (1986), the author of *Ecological Imperialism*, maintains were very difficult to conquer by the European nations. That is because "the African ecosystem was simply too lush, to fecund, too untamed and untamable for the invaders" (p. 137). Indeed the two spaces are similar in terms of extremely hostile

environments—deadly insects in *Nausicaa* might be equivalent in reality to such venomous species as centipedes, ants, mosquitoes and hornets; whereas the Toxic Jungle's noxious miasma is comparable to the threat of micro-organisms or invisible pathogens of the so-called Dark Continent. In reality, West Africa's "most effective defense against Europeans was disease: blackwater fever, yellow fever, breakbone fever, bloody flux, and a whole zoo of helminthic parasites" which accounted for the soaring death toll of European troops and officers in the nineteenth century in this frontier (Crosby, p. 138). In *Nausicaa*, the guardians of the Jungle take various insect forms, but the most dramatic incident is the confrontation between Kushana and the swarm of Ohmu emerging from the lake in the Toxic Jungle as a result of her gunshot. Here Nausicaa serves as the mediator between the foreign invader Kushana, who tends to pull the trigger without much thought, and the mute, alien-looking natives in the form of the Ohmu who are more than ready to defend their territory. In this case, because the situation is under Nausicaa's control, the Ohmu leave without harming anyone.

Apart from the land competition over the Toxic Jungle, the main locale of this film initiates the question of land legitimacy. The Valley of the Wind as an ideal place for farming and comfortable ways of life invites attackers, not only because it is perpetually free from the toxic invasion because of the wind that keeps blowing the poisonous miasma away, but also because the other kingdom we see, the Pejitei, is a town devoted primarily to industrial development and is much less pleasant and wholesome. Viewed from this angle, the Valley stands for a privileged, bucolic space that invokes the sense of environmental attachment at the expense of other, less fortunate kingdoms whose natural environments are less favorable or less abundant, and whose people are thus less able to sustain themselves. War and violence in this film, then, is only a competition for ecologically clean and safe spaces, not a matter of evil forces or revenge as other critics contend.

4. Toxicity and Toxic Discourse

Even though landscape and land entitlement form territorial challenges which might sound pettily anthropocentric rather than biocentric, they lead up to the most significant environmental problem in *Nausicaa*—toxicity. Eikman (2007) provides an in-depth discussion about this issue and explains the relation between the apocalyptic pollution and the toxic discourse in this animation:

> Industrial waste, debris from urban holocausts and the fallout of the weapons themselves are all conflated into an unseen, omnipresent, physically invasive threat, recalling Rachel Carson's introductory fable. There is too little arable land to move elsewhere, so the people must contain their sorrow, but the situation is otherwise resonant with toxic discourse as a genre: "Disenchantment from the illusion of the green oasis is accompanied or precipitated by totalizing images of a world without refuge from toxic penetration." (p. 42)

Interestingly, Eikman recalls Rachel Carson's *Silent Spring* (1962) and cites Buell's "Toxic Discourse" from *Writing for an Endangered World* (2001) in the last part of the above quotation. The first, *Silent Spring*, is regarded as "the classic that launched the environmental movement" as the tagline goes on the front cover of the fiftieth anniversary edition published by Mariner Books in 2002. It is a daring book that exposes the ills of horrifying chemical substances used so widely and relentlessly as pesticides in the United States between the 1950s and the 1960s. In fact, Nausicaa's utterance, "mankind has polluted all the lakes and rivers," rings uncannily close to Carson's "[t]he most alarming of all man's assaults upon the environment is the contamination of air, earth, rivers, and sea with dangerous and even lethal materials" (p. 6). Nevertheless, it is never clear what exactly has caused the Toxic Jungle in *Nausicaa*. The art professor and teacher, Mary Stokrocki and Michael Delahunt (2008), say that whey they show the anime to elementary students in Arizona to encourage ecological discussion, one fourth-grade student asked them, "why is the Jungle toxic?" (p. 8). The answer does not come easily and, instead of providing one in the research paper, the two teachers use the question as a springboard for the discussion together with other questions, such as "How would the baby Ohm[u] see the toxic world from its viewpoint?" (p. 23). These questions, I believe, could initiate further debates on how much one's perception

of pollution and toxicity has actually been affected by cultural mindsets about the external source of pollution and how far one is exposed to the risk. People living in the city, for example, are likely to feel less strongly about the toxic contamination of industrial landfill sites, which are frequently situated in rural areas, than those living right in a fenceline community. But at the same time they would likely feel more scandalized by the fact that local people whose livelihoods are affected by toxic environments might adopt unethical methods to solve their problems.[4]

Apart from Carson's book, Buell's study of the rhetoric of toxic discourse can contribute to our discussion of *Nausicaa*. In the middle of the story a chaotic scene happens in the ancient forest of the Valley because fungi from the Wasteland are discovered to infest a number of trees, releasing spores and turning tree trunks into contaminated hosts. Here the Valley is clearly under threat—villagers equipped with fire guns run wildly around the old forest, saying "If we don't do something fast, the whole Valley will be destroyed." This scene shows confusion and terror from a realization that insidious pollution that could bring about the destruction of the whole community is right at one's door, a typical scenario in narratives of toxicity. Apart from toxic discourse's reliance on traditional pastoralism and disillusionment with the green oasis, Buell (1998) highlights a sort of environmental awakening in Don DeLillo's novel *White Noise* (1985). This occurs the moment Professor Gladney perceives that the hazard from "the airborne toxic event" is not only *real* but is also reaching his family and is probably killing him unknowingly (Buell, p. 648, 662-3). In *Nausicaa*, the toxic hazard is frightening in that it has not gradual but sudden effects in human and other life forms, since to stay in the Toxic Jungle "five minutes without a mask" would mean death. That, however, does not override the fact that in reality, the unknowable and incalculable symptoms of toxic contamination could be just as frightening and could lend as much support to the strength of toxic discourse as the immediate fatal effect. As Carson (2002) maintains, while those exposed to large quantities of pesticide suffered sudden illnesses or death,

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[4] *For example, according to* The New York Times' *article "In China, Farming Fish in Toxic Waters," fish exporters are farming in toxic contaminated water and coping with the problem "by mixing illegal veterinary drugs and pesticides into fish feed, which helps keep their stocks alive yet leaves poisonous and carcinogenic residues in seafood, posing health threats to consumers" (Barboza, 2007).*

for the human population as a whole "the delayed effects of absorbing small amounts of the pesticides that invisibly contaminate our world" is much more worrisome (p. 188). On quite a completely different ground, McCarthy (1999) suggests that the film's catastrophic situation might owe less to sci-fi sources than history: "Japan has had its own twentieth-century apocalypse, and no one who lived through the World War II or studied its history needed the inspiration of science fiction to imagine the Seven Days of Fire" (p. 75). This strand of argument could lead to the possibility that it is the nuclear fallout rather than other organic or chemical substances that is the particular toxic threat in the film. This assumption is rendered more convincing by Japan's first-hand experience with the lethal effects—both sudden and prolonged—of nuclear power, both as a weapon and as a source of energy.

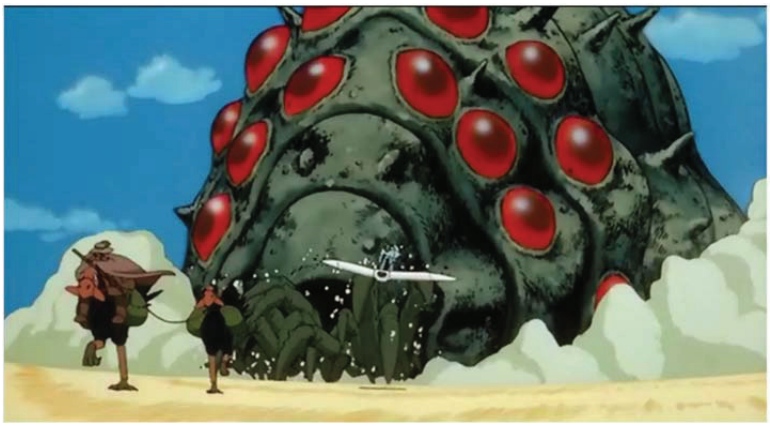
5. Animals

The last topic to be discussed is another major component in ecocritical debates—the animals or the nonhumans and their depiction in literary and artistic works. According to "Literature and Environment" by Lawrence Buell et al. (2011), topics that engage animal studies scholars include the protection of habitats and species that stand in for the protection of nature at large, the sense of human connectedness to nonhuman beings, the tensions and contradictions in the relationship between humans and animals, wild animals versus domesticated ones, large predator species that often occupy the literary imagination and stand for masculine or national identities, violence against animals, anthropomorphism, and so on (pp. 430-2). As animals play a significant part in *Nausicaa*, most reviewers of the film do not fail to mention them, especially the Ohmu. From the spiritual point of view of Loy and Goodhew (2004), "the Ohmu have magical healing powers, and throughout the film nature [and the Ohmu as representatives of the natural world] is depicted in a mysterious, mystical way that is to be respected rather than understood" (p. 69). To Osmond (1998), the Ohmu are valued more in relation to the heroine—he interprets the "giant crawling sentient insect" as a bearer of realization, because it is with it that "Nausicaa finds her higher purpose" and her communion with the insects "turns her into a blend of scientific explorer and spiritual messiah." In McCarthy's (1999) innovative view, the Ohmu seem to be more outstanding

in their animalistic qualities—"[t]he Ohmu are splendid embodiments of raw power, yet their great size and strength is driven by intelligence that manifests in an evolved social system, communication over distances, and extended care of the young, calling to mind that other huge and endangered creature, the whale" (p. 77). Most elaborately, Eikman (2007) considers the Ohmu a magnificent creature both in its physical design and functions:

> Ohmu are physically vast but… their size contrasts against their form, combining sublime individuality with a shape many viewers will associate with inexhaustible, minuscule life near the root of ecological processes… [thus] the Ohmu seem to embody nature… Several times in the history of Nausicaa's world, humans have irritated the *fukai* so much that Ohmu have burst out from it in large numbers, rushed as far as they could get and then died exhausted in human-held lands. Spores carried by the Ohmu would then take root in their bodies, leading to a massive expansion of the *fukai*. (pp. 44-5)

Picture 3: A raging Ohmu rushes after Lord Yupa who has shot a gun at an insect by mistake, while Nausicaa on her glider is trying to save him by using flash grenades and an insect charmer to tame it.



To contribute to these discussions of Miyazaki's imaginative portrayal of the Ohmu, I want to consider them first in terms of phylogenetic class. Generally speaking, people do not regard insects as sentient animals but as pests. For this reason, they are the primary victims of human destruction. While most of us might feel it is immoral to kick

a dog, slaughter a cow, or hunt a wild elephant, it is rarely troubling to the conscience to slap a mosquito or spray DDT into a cockroach nest. According to Garrard (2012), one issue that preoccupies animal scholars is the "principal of equality" and ethical justification against cruelty to animals, which is based roughly on a sense that there are some similarities—or in some cases rationality—in those animals, which make them deserve our moral consideration. Quoting John Berger, Garrard explains that "when we look at animals, they may return our gaze, and in that moment we are aware of both likeness and difference" between us and them (pp. 146-7, 152). However, these are apparently not applicable to insects, usually perceived as low, insignificant, and in many cases harmful, regardless of the fact that they are virtually indispensable in any ecological system—as a major player in decomposition of organic waste, as pollinator, and as food to larger animals. This might account for the contradictory depiction of insects in the film. They are drawn to be extremely monstrous and repulsive, but at the same time are endowed with positive qualities as the protective guardians of the forest, particularly the Ohmu with the sacred, healing ability. Though the Ohmu seem brainless and easily infuriated, they are capable of intellectual capacity and are complex sensory beings so far that their stampede could be stopped not by force but by emotional recognition of Nausicaa's love. Scholars have attributed the origin of Nausicaa's character to a princess who loves insects in a traditional Japanese folktale (Osmond, 1998; McCarthy, 1999, p. 74), and in this film the Ohmu and the heroine indeed seem to develop a special relationship with each other. Surprisingly, the insects' seemingly violent and irrational tendency could be perfectly understood by Nausicaa, to the point that more than twice they can even be *tamed* by her. This complex and exceptional alliance is an interesting challenge to the traditional inter-species relationship that has been generally limited to exploitation and hostility. Unlike the two horseclaws or the fox-squirrel, two other animals which are naturally wild but are domesticated in this film; insects are typically seen as alien and, with the exception of bees, are undomesticable—definitely not a form of life one could easily associate oneself with or feel a strong attachment to. Therefore, by choosing insects to be the medium between nature and civilization instead of any higher forms of life, Miyazaki succeeds in

urging the audience to perceive them in a more positive light and in highlighting Nausicaa's capacity to value all lives equally.

The second notable point about the arthropod in *Nausicaa* is the fact that they seem to be the last wild inhabitant on earth and that they live comfortably in the Toxic Jungle. This can again remind one of *Silent Spring*. First of all, the animation seems to suggest that insects or pests, despite our understanding of them as tiny and fragile, are in fact one of the most persistent animals on earth. While, for example, the extensive and intensive spraying of chemical substance to get rid of Japanese beetles in Sheldon, Illinois in 1954, managed to "virtually wipe out" brown thrashers, starlings, meadowlarks, grackles and pheasants, as well as rabbits, muskrats, fox squirrels and other mammals both wild and domesticated, Japanese beetles continued to thrive and expanded westward (Carson, 1962, pp. 91-5). In fact, insects are very difficult to control or kill off despite our constant invention of insecticide because they can develop a resistance mechanism. For instance, some bugs could carry a type of DDT in their body and live as long as they lay eggs; afterward the young would grow and no longer be susceptible to the poison. More fascinatingly, some flies even "possess an enzyme that allows them to detoxify the insecticide to the less toxic chemical." Therefore, "[b]y the end of 1951, DDT, methoxychlor, chlordane, heptachlor, and benzene hexachloride had joined the list of chemicals no longer effective. The flies, meanwhile, had become 'fantastically abundant'" (Carson, pp. 273-4, 267), just as the insect species flourish in the Toxic Jungle. Secondly, both Miyazaki's film and Carson's book seem to point toward the same warning that humans themselves would have to answer for their conduct and suffer serious repercussions of their poisonous destruction. Our triumphant managements of insects through toxic substances have been brief: each time the attack bounced back in the form of contamination into our community, and the ecosystem on the whole has suffered. Once the insects, the major target of our eradication, are the only wild animals left, and all our natural resources—air, land, and water—have been poisoned, humans will have to learn to live in the resulting toxic environment and with the insects that can never be overcome. This is a grim warning from Miyazaki's *Nausicaa*, although we have yet to wait for the enlarging transformation of these crawling or winged creatures.

6. Conclusion

Before closing, I would lastly like to reappraise *Nausicaa*'s strengths and weaknesses as a green animation. From the discussion so far, it is clear that the story contains very strong ecological messages—it frowns upon humans warring against nature and each other; it realigns human-animal hierarchy and coexistence and elaborates the inter-species dependency in the ecosystem; it demands an end to animal cruelty; and it reduces separation and undermines the base of duality between humans and nonhumans. These are all praiseworthy from the ecocritical perspective; however, the film can still be criticized on at least three grounds. The first is the characterization of Nausicaa, the protagonist. On the one hand, it is true that her loving and compassionate qualities are admirable and they neatly establish her as a wonderful role model to cultivate inter-species empathy in young audiences. The choice of a female protagonist is deliberate as, in Miyazaki's words, "Nausicaa is not a protagonist who defeats an opponent, but a protagonist who understands, or accepts. She is someone who lives in a different dimension. That kind of character should be female rather than male" (qtd. in McCarthy, 1999, p. 79). This corresponds to ecofeminist view about gender and the frequent depiction of women as nature and nurturer.[5] On the other hand, Nausicaa's heroic deeds and important role as the protagonist have overshadowed other elements in the story—it is, for example, obvious in many film reviews that this female leader attracts a lot more attention than the ecological complexity of the natural world in which she is situated. Besides, while Nausicaa could possibly be an exemplary deep ecologist who advocates the well-being of all nonhuman lives on earth regardless of their usefulness to humanity, Eikman (2007) is wary of the fact that Nausicaa removes a crystal lens from an Ohmu's shell for the people of her valley to use as a window. By doing so, she seems to "deny the animal its subjectivity on a symbolic level" and, even

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[5] *According to Huggan and Tiffin (2010), women are closer to nature "particularly through such bodily activities as childbirth and child rearing" as opposed to the mind concerned more with their male counterparts (p. 158). Also, Sherry B. Ortner in "Is Female to Male as Nature is to Culture?" (1974) contends that women were subordinate to men in the same way as nature is subordinate or dominated by humans and culture and "[b]eliefs that legitimate the oppression of women also legitimate environmental degradation" (qtd. in Kerridge, 2006, p. 537-8).*

more severely, “it appears that even the heroine is glad to exploit threatening nature in symbolically emphatic ways to further human industry” (p. 45). Another instance might call into question her love for natural beings or her capacity to protect them. In the middle of the story, down in the private underground laboratory Lord Yupa finds that Nausicaa has gathered spores of the most lethal plants from the Toxic Jungle. With clean water and soil from the town’s deep well, she has managed to cultivate non-poisonous trees. However, it turns out that the reason for her experiment is largely personal and homocentric—“I was hoping to find a cure for father’s illness, but it’s too late now, I’m shutting down. I’ve already cut off the water; soon these plants will wither and die.” Even though this project could be a start toward a better understanding of the Toxic Jungle and lead to the betterment of the community or the improved coexistence between human and nature, it is given up abruptly at the expense of many fascinating budding plants she has taken pains to collect, simply because her father has died. Arguably, this does not mean that Nausicaa is a selfish, insensitive person; yet it is difficult to refute that the extent of her concern toward the natural world is overridden by pervasive and hostile environmental elements of which she actually has little control.

Picture 4: Nausicaa extracts a crystal clear glass-eye of an Ohmu shell in the Toxic Forest.

Apart from the characterization of Nausicaa, many critics find that the ending of the story is too simplistic, with Nausicaa as an all-loving, sacrificing messiah. For instance, Marc Hairston (2010) calls Nausicaa's peaceful settlement with the Ohmu a "miracle," and discusses Miyazaki's dissatisfaction with the film's ending—"Miyazaki was unhappy with the forced deus ex machina ending he created and personally gave the film a grade of only 65 out of 100 points" (p. 177). While appreciating Nausicaa's unconditional respect for living nature, Eikman (2007) complains that the density of fantasy and religious symbolism in the film makes it difficult to convey serious ecological points, and that by "cutting out the eye of an Ohmu and being resurrected on wheat, Nausicaa symbolically communicates a sense that major human impositions can be legitimate, and perhaps sacred" (p. 48). More importantly, Julia Sertori in *Anime U.K.* wryly observes that "the story promises a blue-clad messiah to save the world, only to let us discover that the world doesn't actually need saving… [and] that environmental crises are best solved by complete inaction" (qtd. in McCarthy, 1999, p. 90). Unlike these comments, my criticism of this film rests on the fact that in this story the cause of the Toxic Jungle is said to be man-made but is never directly specified. This, I believe, substantially reduces the audience's sense of responsibility for the planet's ecological degradation, when compared to, for example, *Silent Spring* or *White Noise*. By leaving this significant element of ecological causation unclear, *Nausicaa* seems to challenge the proposition, if not a fact, that it is the human civilization that brings about pollution and toxicity. While Garrard maintains that toxic discourse and pollution anxiety could perpetuate "a harmful distinction between nature, seen as wild and pure, and the toxic taint of humanity" (2012, p. 15), *Nausicaa* reversely obscures humans' part in contaminating the earth's environment and overturns the conventional dichotomy of nature and human society. In fact, it almost hints that the forest is in itself the very source of danger, or that toxicity is inherent in nature. Thus, instead of Carson's image of men armed with pesticide appliances ready to exterminate unwanted organisms in nature, we are made to take in plants and insects naturally producing toxic hazards, discharging spores and poisons to wipe out people whose clean and safe civilization is at risk. Thus, the blame seems to be shifted to the pervasive, obnoxious quality of nature instead of humans' doings. In this respect, many critics regard the threatening and

ever-spreading pollution of soil and water as a case of nature-strikes-back or, in Eikman's words, "a divine punishment for the sins of the past, a vengeance of gods or the personified Earth" (2014, p. 43). However, to me the relationship between nature and human beings is not a one-sided victimization but a two-way interaction: the natural world and the human community are likewise being threatened. This echoes the real situation in which people keep on destroying forests and contaminating more and more spaces in all possible ways through consumption; at the same time they encounter heavier and more frequent incidents of severe weather and natural disasters.

Lastly, although what constitutes toxicity in the film is never fully explained, it is useful to mention here the event behind Miyazaki's creation of *Nausicaa* and the Toxic Jungle.

> In conversation with the American novelist Ernest Callenbach, author of *Ecotopia*, in 1985, Miyazaki said that there was "one big event" that led to the creation of *Nausicaa*: the pollution of Japan's Minamata Bay with mercury.[6] Because the pollution levels rendered the fish inedible, people stopped fishing there and within a few years there was a huge increase in fish stocks in the bay, far in excess of anywhere else in Japan. Miyazaki said that the news "sent shivers up my spine." He admired the toughness and resilience of other living creatures, that they could absorb the poisons humans create and continue to thrive. (McCarthy, 1999, p. 74)

This is the inspiration of Miyazaki's rendition of insects that could resist contaminated environment, and trees in the Toxic Jungle which are capable of detoxifying themselves and recreating clean resources. Both the Minamata Bay incident and Miyazaki's creation are truly amazing, but they lead to my third point of criticism of this film as a pro-

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[6] *The Minamata Bay Incident was one of the most severe incidents of industrial pollution and mercury poisoning. A petrochemical and plastics company dumped an estimated 27 tons of methylmercury into the Minamata Bay, Japan, creating a highly toxic environment that contaminated local fish and residents. An estimated two million people suffered health problems; some were left permanently disabled from the contamination. Symptoms of this form of toxicity, called Minamata disease, include sensory disorders, convulsions, seizures, paralysis, and death (Griesbauer, 2007).*

environmental one: that it seems to rely too heavily upon the perfection of nature. It is so apparently emphasized in the revelation scene underground that the earth is unconditionally able to purify itself no matter how badly contaminated it is. This only confirms the indestructibility of nature, which, however much we would like to indulge ourselves in, might not always be the case.

This essay is being written in 2016, more than thirty years after the creation of *Nausicaa*. Unlike many other films that would be terribly dated after three decades, this particular animation seems to be increasingly timely. Only five years back Japan experienced a nuclear disaster at Fukushima Daiichi Nuclear Power Plant in the aftermath of a tsunami earthquake, resulting in widespread radioactive contamination that has yet to be remedied.[7] We hear news daily about pollution-stricken cities, oil spills, toxic gas leakages and hazardous waste contamination from every corner of the world; and this is why a film like *Nausicaa* is still relevant. It might be true that the ecocinema as an entertainment is inescapably embedded in consumer culture—a destructive force in the eye of environmentalists—and that animation, though visually engaging, only involves improbable imagination that verges on the realm of fantasy and lacks credibility. Despite these arguments, Miyazaki's *Nausicaa of the Valley of the Wind* remains one such animation that I believe could render difficult ecological problems more accessible to a wider audience and could spark off lively debates on these pressing issues. Even though it is by no means a flawless, quintessential green animation, its effort to promote an ecocentric vision and its variety of ecocritical agendas would continue to inspire environmental consciousness in the twenty-first-century and beyond.

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[7] *For example, Greenpeace has recently reported that environmental and health impacts of the Fukushima nuclear disaster might last for centuries. Saying that there is "no end in sight" to the ecological fallout, "the impact in a number of areas will continue, which will include but not be limited to mutations in trees, DNA-damaged worms and butterflies, as well as radiation-contaminated mountain water tables" ("Fukushima Causes Mutations," 2016).*

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