

The Essence of Free Market Environmentalism: Protection through private property

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Abstract

In the 21st century, public policy actors are increasingly confronted with environmental questions that, as for now, have been solved through actions of state-control. This paper studies the theories and practicality of free market environmentalism and its fundamental difference with current regulatory systems. The research focuses on the conceptualisation of property rights by different economists and philosophers and seeks to illustrate how policies relying on a consistent defence of property rights or the absence of state actors altogether could indeed be beneficial.

The end of the 20th century has started to shape the importance that environmentalism plays in politics and public discourse, through the birth of powerful NGO's such as Greenpeace or WWF, the development of recycling practices, the arrival of energy produced through alternative energy sources, the ever growing sensitivity towards endangered species, the emerging of environmentalist political parties or through political figures such as Al Gore, the embrace of the political mainstream of environmentalist policies. In the 21st century environmentalism is an integrated factor of public

policy, yet there are a myriad of approaches in the aspect of how to achieve a drop in global temperature, less pollution or increased protection of endangered species.

Free-market environmentalism (FME), a market approach to the protection of the environment, is a lesser known way of tackling these issues, yet it is not only appealing in its radical approach, but also divergent in theory within itself. FME has a wide scholarly range that derives its philosophy from the classical liberal movement, but divides into very differing perceptions concerning its implementation.

The liberal scholars, up until the school of modern anarcho-capitalism, disagree on matters such as taxation or the use of property rights, which makes the concept difficult to define. Only a few research groups and think tanks, including the US-based Property and Environment Research Center (PERC) or the think tank Strata, both referenced in this paper, focus solely on FME in their policy research. The theories of liberal authors such as Friedrich Hayek, Ronald Coase, Murray Rothbard, Milton Friedman or Adam Smith, serve as the baseline for this research.

In general terms, Free Market Environmentalism purports the idea that current environmental policy is deeply misled on the assumption that government actions remedy the problems related to sustainable development. FME suggests, as a general rule, that the current marketplace is overregulated and distorts market prices, which contributes to the degradation of the environment.

This paper will attempt to illustrate the different theories relating to Free Market Environmentalism, to analyse its application in practice.

I. A counter-intuitive concept

At the sound of hearing "free market environmentalism" (FME), there is a certain tendency to suggest that we are dealing with an oxymoron. A major contributor to this is the notion that

climate change and pollution are "market failures" by the widespread journalistic narrative. There is nonetheless a larger philosophy behind what makes the essence of free market theories, which especially goes into the concept of property rights and deep into economic theory. It promotes the study of spontaneous market evolution contrary to political action. Over the course of its analysis, it is to be immediately pointed out that essence of FME is not to advocate the absence of any intervention (or 'doing nothing'), but it rather says the actions of property rights through the rule of law and market demands as driving factors for increased sustainability on environmental issues.

The primary question FME raises is not "what" should be done, but "who" should do. FME should be understood as a movement of scepticism towards state interventionism and advocacy for private property rights, which can be either enforced in a state of limited government or be understood as concept adhering to the non-aggression principle (aggression including the violation of the property of another individual).

What is commonly identified as a market failure would be argued by advocates of FME to be failures of the regulatory state. There is, therefore, not only fundamental disagreement on the solution to the problem, but also on the identification of its cause.

II. Theoretic bases

This section will explore the different theoretical approaches that exist inside the concept of Free Market Environmentalism. It needs to be noted that these theories can be in contradiction with each other – for instance, those arguing for the existence of government to implement authorities able to protect private property rights and those refuting that state institutions are necessary to reach their goals – without negating the general idea that the concept of individual ownership serves as a protection for the environment.

In general terms, all of the proponents of these theories can be identified as “libertarians”, with distinctions between those who believe that state institutions need to be reformed or reduced and those believing that state institutions are not only unnecessary but also counterproductive.

2.1 Property rights and the rule of law

The Heritage Foundation defines property rights as follows:

"The property rights component is an assessment of the ability of individuals to accumulate private property, secured by clear laws that are fully enforced by the state. It measures the degree to which a country's laws protect private property rights and the degree to which its government enforces those laws. It also assesses the likelihood that private property will be expropriated and analyzes the independence of the judiciary, the existence of

corruption within the judiciary, and the ability of individuals and businesses to enforce contracts." (Heritage Foundation, 2016)

Property rights are an essential good in the striving for free-market environmentalism, since they influence **human behaviour** through the changing **perception of responsibility**. The fundamental claim is that individuals hold their own property, when it is protected by government, as a higher good than their fear of regulatory sanctions. This is illustrated in the divide between **public property** and **private property**. For instance, this phenomenon comes to light when looking at the water consumption of flat buildings. It is difficult to encourage water efficiency through price signals (The Atlantic, 2011), since owners and renter of multi-flat buildings do not actually pay their very own consumption. Instead, the water consumption is divided between all the tenants. An OECD report (OECD, 1999-2000) found that two-thirds of OECD member states meter more than 90% of single-family houses, yet for flat buildings the report only mentions "a few a metered". There is evidence supporting that individual metering of water reduces overall water consumption. In the United Kingdom, a study (Lis Stedman, 2006) shows an instant drop of 10%, while the 1993 German tap water report (Trinkwasserversorgung in Deutschland, 1993) shows a difference of an 18% lower consumption compared to flats that were not metered. This situation is comparable to nature of public property, since it

follows the principle of **collectivism/common ownership**. The critique of FME towards this collective ownership is the loss of individual responsibility, a void which then has to be filled with regulation. The American Property and Environment Research Center (PERC), a research institute dedicated to study of FME, describes to advantageous nature of property rights as follows (PERC, 2016):

"Property rights make the environment an asset rather than a liability by giving owners an incentive for stewardship."

The defence of property rights demands the existence of the rule of law, a justice system ready to establish property and that punishes its violation. If the use of property rights is not based on proper consent and they are in themselves not easily transferable, this would negate the concept of property rights as such and be contrary to FME (Richard L. Stroup, 2016). Without the existence of the rule of law and its implication of force, restricting the arbitrary use of power (Oxford Online Dictionary, 2016), property rights would be a mere philosophical concept that would have to be generally accepted before it could be established. Illustrations of the importance for the rule of law will be given in *FME in practice* chapter.

2.2 Coase Theorem

The British Nobel Prize-winning economist and author Ronald Coase (1910-2013), also known for his works on transaction cost analysis, developed this theorem in order

to best illustrate economic efficiency and allocation of resources on the marketplace when confronted with external factors, all in the absence of regulation. Apart from the assumption of the existence of clearly defined property rights, Coase did not suggest a solution to the confrontation of externalities, he merely observed that if confronted with the latter, and as long as the problem is reciprocal to conflicting parties, the marketplace would find the most efficient solution.

The Ronald Coase Institute develops the concept in his theorem as follows (Ronald Coase Institute, 2016):

"Coase further suggested that, if transaction costs were zero, then it would not matter which of the affected parties were found to be legally liable for a social cost, since they could costlessly negotiate agreements to maximize their wealth; and the right to use property, make noise, or pollute would end up in the hands of the one who values the right the most."

Coase famously illustrated his theory on the regulation of radio frequencies. In his counter-intuitive argument he suggested that a situation in which competing radio stations are trying to use the exact same radio frequency, no governmental regulation was needed and that in contrary, competing interests would find the most efficient outcome. As long as property rights were in use, the radio station that is able to accumulate the highest amount of value out of the use of the frequency will end up paying for its

use, even if it was owned by a different station at the time. Coase opposes resource allocation in its classic economic perspective between central planning and spontaneous market order.

It needs to be said nonetheless that Coase recognised that it is impossible to wind back time, so that initial allocation of property rights by a governmental institution cannot be ignored. The transaction cost must therefore encompass the "head-start" of the station that the frequency was given to.

In summary, the Coase theorem seeks companies to internalise externalities to its absolute maximum. How does this apply to environmentalism?

The same principle that applied to the example of radio frequencies also applies to environmental externalities. If property rights work identically on factors such as pollution, then pollution - as a result of the production of goods - becomes a liability, a negative externality, that a company has take into account. Under these circumstances, actors on the marketplace need to negotiate, and thereby internalise these externalities. Supporters of this theorem as a solution to environmental problem believe that private ownership is the most effective protector of the environment, provided ownership is transferable and backed by courts that make people liable when their pollutants invade the person or property of others.

Further illustrations on the examples of pollution will be given in the chapter *FME in practice*.

2.3 Rothbardian anarchism

Murray N. Rothbard (1926-1995) was an economist, historian and political theorist who is at the philosophical heart of **anarcho-capitalism**. This belief system rejects the concept of a state, generally out of moral objection, and praises the effectiveness of peaceful interaction between individuals and the guiding hand of free markets. Although anarcho-capitalism rejects environmental regulations by government by principle, it does answer nonetheless to environmental policy. To understand a Rothbardian interpretation of FME (although Rothbard did notably reject the term of "free market environmentalism"), it needs to be pointed out that its proponents define property differently.

Rothbardians follow the **Labour Theory of Appropriation** of John Locke. Locke establishes property through usage and declares the possibility to live on an own property a **natural right**. For natural law theorists, a declaration of property (for instance through fencing off a piece of land) is meaningless. They believe that individuals own themselves and their own body, which makes them legitimate property holders of their own labour. As long as an individual utilises a piece of land for his own self-interest by actively putting labour into it, he is capable of calling this natural resource his homestead property. Rothbardians adhere to this concept of self-ownership, however reject the concept of the **Lockean proviso**. The idea of the Lockean proviso, developed by the American philosopher Robert Nozick

(1938-2002), is that the conversion from public property into private property included a moral sense of responsibility: the act of claiming property cannot make another individual worse off. This minimalist view on the accumulation of wealth calls for a certain scepticism in the realm of free-market thinkers. Columnist Matt Zwolinski writes about this :

"This "Lockean proviso" has been thought by many to be difficult, if not impossible, to meet. How could any act of appropriation leave as much and as good for others, when natural resources are finite?" (Matt Zwolinski, 2013)

Murray Rothbard rejected the Lockean proviso in the absence of knowledge of how to allocate resources for people's good (David Gordon, 2007). Rothbard also criticised Nozick's view on compensation, refuting that the act of compensating a liability justifies the prior violation of a right (Murray N. Rothbard, 1982). Here's where anarcho-capitalism parts ways with different other theories: while asserting the importance of property rights for the allocation of resources, Rothbardians are consistent consequential when it comes to immediate pollution as a committed damage. Murray Rothbard admitted in his 1973 book *For A New Liberty* that pollution is a private property violation (Murray N. Rothbard, 1973):

"The vital fact about air pollution is that the polluter sends unwanted and unbidden pollutants – from smoke to nuclear fallout to

sulfur oxides – through the air and into the lungs of innocent victims, as well as onto their material property. All such emanations which injure person or property constitute aggression against the private property of the victims. Air pollution, after all, is just as much aggression as committing arson against another's property or injuring him physically. Air pollution that injures others is aggression pure and simple."

Anarcho-capitalism therefore takes a radical position on the question of pollution, since it considers it to be in violation with the **non-aggression principle** (NAP). The NAP rejects all forms of coercion and that no form of aggression can ever be justified, which leads its supporters to reject to concept of a state. The radical position of Rothbardian anarchism on environmental damage has been criticised (Ryan McMaken, 2016) for being too unforgiving and of lacking the support of clear definitions when it comes to the quantification of environmental damage and its origins.

2.4 Reformed tax systems - Geolibertarianism

The geolibertarian philosophy is convergent with classical liberalism and is not inherently tied to free market environmentalism by its interpretation of property rights. Although geolibertarians, like all libertarians, believe in the concept of **self-ownership**, that one is the property holder of one's body and therefore holds legitimate ownership of the fruits of one's labour, they refute that occupation of resources (such as land) for the

accumulation of wealth makes these resources individual property. They believe instead that the planet is a common heritage that should be accessed by everyone equally under the law.

Geolibertarians suggest to reform the tax system in order to incentivise environmental protection, without being opposed to the general concept of free markets. They uphold the concept of **land value taxation** (LVT). LVT taxes unimproved land value (meaning the value of the land without the improvements made through human action, such as the construction of a house), and redistributes the so called *Citizen's Dividend*. This policy is known as the oldest existing **basic income** proposal, dating back to 483 BC (Wordsworth, 1996), when a silver deposit was found in the village of Laureium near Athens in Greece. The Athenian leader Themistocles convinced the local population to invest the revenue from this deposit in a large fleet. This proposal was opposed to the idea of the statesman Aristides who wanted to share the dividend from the mine (10 drachmas each) equally among the population, as a basic income.

As a proponent of the Lockean proviso, Geolibertarianism rejects the accumulation of landmass by individuals and therefore encourages taxation as a means to come closer to a level playing field. In this instance the LVT is a mere concession issued by the general public for the use of the individual piece of land, which **negates the concept of private property**. In this philosophy, which is at

odds with certain aspects of most FME theories, the collective vision of property only applies to natural law, as it did for John Locke. Furthermore, this perception leads geolibertarians to favour centralised repercussions to the act of polluting, through favouring so called **Pigouvian taxes**

"Pigouvian taxes, named after Arthur C. Pigou, a renowned English economist from the early 20th century, are designed to correct what economists call "market failures" or "negative externalities" that impose spillover costs on society, such as pollution".
(Tax Foundation, 2016):

Unlike other collectivist philosophies, geolibertarianism only applies Pigouvian taxes to environmental externalities such as pollution or the extraction of natural resources.

2.5 Altruistic market demands

Outside of established theories, there is a point to be made about market demands. Microeconomics teaches that individuals follow a certain rational of a cost-benefit analysis. However, the charitable aspect of consumption cannot be ignored: there is for instance a higher demand in environmental labelling (so called eco-labelling), than there was before. In order to illustrate this phenomenon, we'll take a look at the Global Eco-Labelling Network (GEN), a non-profit association dedicated to fostering cooperation between different eco-labels, promoting the practices of these labels and encouraging the consumption of

sustainable products. Groups like these show how market transparency for the consumer can be a result of voluntary cooperation. The GEN differentiates today between three types of labelling established by the International Organization for Standardisation (ISO) (Global Labelling Network, 2016):

TYPE I:

A voluntary, multiple-criteria based, *third party* program that awards a license that authorises the use of environmental labels on products indicating overall environmental preferability of a product within a particular product category based on life cycle considerations.

TYPE II:

Informative environmental *self-declaration* claims.

TYPE III:

Voluntary programs that provide quantified environmental data of a product, under pre-set categories of parameters set by a qualified third party and based on life cycle assessment, and verified by that or another qualified third party.

The demand for these labels for the purposes of consumer transparency has been continuously increasing. This trend has been especially visible for organic products. A study by the Organic Trade Association (OTA) has found (Organic Trade Association, 2016) the expenditure on organic foods per household (in the United States) to more

than double in the period between 2006 to 2016.

This development is indicative of a conscious of environmental protection among the general population, which does not necessate governmental control.

III. FME in practice

3.1 Pollution

In order to uphold the spirit of FME, private property rights need to be upheld, which is only possible through the rule of law, thus an effective court system. In practice, and paired with the definition of FME being that negative externalities become a liability, it means that in the case of pollution, individuals can sue companies and other individuals for the pollution they committed. In an article for the Cato Institute, Fred L. Smith Jr., and Kent Jeffreys describe this situation as such:

"Pollution is generally some form of waste, but even if pollution were unavoidable in certain manufacturing processes, strongly enforced property rights would force polluters to either clean up or close shop. By definition, pollution is a trespass against someone's property or person. If the trespass is so minor that it creates no impact or inconvenience for the property owner, it will normally be tolerated, even under common law rules." (Fred L. Smith, Jr., & Kent Jeffreys, 2016)

One example of practicing this respect for property rights leads to the

inevitable conclusion that the principle that the polluter should pay for his pollution is correct. This can effectively be implemented for instance through the privatisation of motorways. If we presume the motorway is owned by a private company, then this company will be liable to the neighbouring landowners' loss of land value due to pollution and noise. Compensating those liabilities will be costly, and the owner of the motorway will proceed to levy this burden on the consumer, who are the initial polluters. This leads to the conclusion that there will be major incentives to not make use of a car, since its negative externality has to be taken into account.

Another effective illustration of this phenomenon would be the privatisation of waste disposal. Without looking into the question if it is paper or plastic bags in supermarkets that is the harmful choice for the environment, let us assume that both cost the exact same price. Under this premise, the market demand will be equal for both bags, since it will merely depend on the personal preference of the consumer, since he does not carry a heavier cost for one of them. This situation emerges when waste disposal is run by government, since the disposal of either bag bears the same cost as well in terms of what is charged. The question whether or not it is more difficult or not to dispose a plastic bag or a paper bag is never asked, since waste disposal is collectivised.

If we would now assume that waste disposal was a private service, then consumers and companies would

internalise externalities: they would ask the question which additional cost do I bear for either choice? If it were indeed true that plastic bags are more difficult to dispose than paper bags (which by the pure nature of this illustration, and the marketplace as such, does not play any role), then consumers on all ends would be incentivised to opt for the paper bag. Here is where the invisible hand of the marketplace leads consumers to make sustainable choices.

3.2 Endangered species

When it comes to the protection of endangered species, free-market environmentalism draws out the effect of economic incentives. The question asked must therefore be: what incentivises locals to protect animals they otherwise would have no interest in whatsoever? FME tries to shift the incentive away from escaping a governmental sanction by leaving these animals alone, to a positive and lucrative incentive to protect them.

A specific example of the effects that the rule of the marketplace has on endangered species can be seen with exotic wildlife animals such as the rhinoceros or lions in Africa. There is a consistent public outrage about trophy hunting, meaning the act of shooting rare animals for sport. The Humane Society defines trophy hunting as such:

"Trophy hunting is defined as killing wild animals for their body parts, such as head and hide, for display but not primarily for food or sustenance." (Humane Society, 2016)

This hunting sport has gotten increasingly popular over the years. As National Geographic reports in 2016, these hunters imported more than 1.26 million trophies to the United States between the years 2015 and 2014, which is an average of 126,000 trophy imports a year, or 345 a day (National Geographic, 2016).

Trophy hunting however is not the reason for why these species are endangered in the first place, they suffer considerably more from loss of habitat and poaching (Scientific American, 2016; PoachingFacts, 2016). In the case of loss of habitat, the endangered animals are driven out due to agricultural expansion for the harvesting of timber, wood or fuel (WWF, 2016).

In accordance with FME, the local population can be incentivised economically to protect these animals. In fact, in Namibia, the revenue from trophy hunting is the main revenue source for the funding of wildlife conservancies (Biological Conservation, 2007) and in South Africa trophy hunting reportedly incentivised locals to give rhinoceros' land to live on and to protect them from poachers (Conservation Magazine, 2015). This evolution has led the number of existing rhinoceros to jump from 100 in 1916 to over 18,000 today (World Wildlife Fund, 2016). According to South Africa's Department of Environmental Affairs the total revenue from trophy hunting was close to R807 million (52.3 million euros) in 2012 and just over R1 billion (64.8 million euros) in 2013 (South Africa Department of Environmental Affairs, 2012, 2013).

The author and libertarian economist Walter Block (Walter Block, 2016) described further illustrations in a lecture for the Australian Mises Seminar (Walter Block, 2013). In fact, Block talks about the specific privatisation of animals on a large scale. With the inquiry: "How come the bison came close to extinction, yet there is still cattle?", Block explains the incentive of protection of animals if they are private property. This is the so-called Tragedy of the Commons. This phenomenon is being defined as:

"Archetypical social phenomenon where an attempt to exploit others (or 'the system') in one way or the other eventually turns out to be self-defeating." (Business Dictionary, 2016)

Bison were considered as wildlife that did not have a specific owner, so in order to maximise profit, people would hunt as many of them as possible, which ultimately drove them extinct. Cattle on the other hand were privatised, so killing cows that were not wild created a liability and a situation of violation of property, since they belonged to someone else. This system has not only protected cows from becoming extinct, it made it an incredible numerous animal that is harvested in multiple manners by modern agriculture.

Others, such as Peter J. Hill (PERC research), have concluded that the near extinction of the bison was due to the increasing demand in land for cattle, which proceeded to deprive them of their natural habitat. In his publication *Are All Commons Tragedies? The Case Of Bison In*

The Nineteenth Century (P.J. Hill, 2014), Hill explains that even though property rights in the open prairies were not well defined for the bison, there is no reason to believe that the tragedy of the commons applies. He claims that the bison is simply not a valuable resource, and there the establishment of rights for bison was deemed unnecessary.

3.3 Innovation

The underlying concept of all FME thinkers is the belief of the inability of knowing the future, being opposed to what Nobel-prize winning economist Friedrich A. Hayek (1899-1992) called the pretence of knowledge. They believe that future innovation is unpredictable, yet that its historical trend has only been positive in the sense of sustainability. Indeed, despite the dramatic population growth and therefore increased energy consumption, many everyday devices turn out to improve significantly over time. A notable example to this is the historical evolution of fuel economy in cars: in statistics (EPA, 2011) published by the US Environmental Protection Agency (Pew Charitable Trusts, 2011) show that fuel economy has dramatically increased since 1975, rising from about 10 MPG (miles per gallon) to over 30 MPG until 2010.

Although the agency might suggest that these changes are due to environmental protection regulation and carbon tax measures, more needs to be said: companies are, by nature, incentivised to produce cars with a higher fuel economy, since consumers demand lower

petrol costs for their vehicles. Evidently so, the volatility of the petroleum market has also fostered the development of electrical cars.

If, on the contrary, governmental institutions were to overtax carbon emissions to a degree that the usage of a vehicle becomes a questionable investment for the consumer, then the lower demand will manifestly hamper innovation. This leads to the conclusion that in order to innovate in the sector of sustainable development, the exact products that today are considered to be harmful for the environment necessitate an increased demand.

IV. Critique on the current centralized regulatory system

4.1 The failure of market socialism

F.A. Hayek's *pretence of knowledge* applies to economics, the environment or public policy in general. He wrote in "*The Fatal Conceit*":

"The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design."

Free-market environmentalist issue the same critique towards the regulatory system we are momentarily in. They presume that knowledge about how to best preserve the environment cannot possibly lie in a political bureau, it is spread among all individuals. The same way that economic intervention creates

malinvestments, government institutions unintentionally create wrong incentives and hamper economic growth.

Regardless of the nomenclature employed by market socialism, the goal remains the same: directing human behavior through state action. The presumption that advocates of state intervention defend is that individuals cannot possess the necessary knowledge and make "wrong choices". FME advocates tend to respond that if the concern that individuals fail to make the right choices is legitimate, then transferring the power of decision-making from some individuals to a group of individuals now called government is inherently counter-productive. FME rejects the notion that environmental solution can ever be directed through centralised control. A report by the Utah-based policy research group *Strata* explained this phenomenon as such:

"Unintended consequences easily arise from even the most well-intentioned policies. When making policies, government officials cannot know all relevant information or foresee all possible outcomes. Even with large numbers of well-educated advisors, policymakers can still pass flawed laws that impose unintended economic or environmental harm."

(Strata, 2016)

4.2 Easement of significant pollution

Free-market environmentalists criticise furthermore that unlike the pretended defence of the environment, current environmentalists fail to punish significant pollution. By denying the concept of property rights and therefore regarding polluting someone else's private property as trespassing, state-environmentalists rely solely on the sanctioning of legislation, all

while individuals cannot act themselves on the pollution of their property by someone else. Allowing a court system to act upon liabilities would, according to FME thinkers, significantly reduce pollution.

V. Conclusion

Environmental protection is undoubtedly one of the main challenges of the 21st century. This paper investigates the incentives created through the marketplace in the absence of centralised state regulation, how inducing personal responsibility through private property helps to protect the environment, or the absence of state actors altogether fosters sustainable development. Some FME thinkers purport the idea that if environmental protection includes the protection of property rights through the rule of law, then we can expect significant reduction of pollution and increased sustainable development over time. Others reject the idea that the state is needed, and that a society based on voluntary exchanges between consenting individuals is essential for behaviour that leads to sustainable development. In general terms, Free market environmentalism refuses the concept of the *pretence of knowledge* and recognises that the competencies regarding environmental protection lie in each and every individual.

This inability to define FME as a defined school of thought is a weakness when it comes to identifying its proponents, but it simultaneously excludes it being a mere theory used for policy advocacy. In fact, the deregulation that it supports would not support corporate interests, but could, depending on the model that would be implemented, even

be harsher on businesses and individuals attempting to disregard the environmental costs of their actions, by making them bear the full costs they brought on other individuals through hurting them or their private property.

The fact that property rights stand at the core of the FME-argument is not problematic, yet the fact that the thinkers disagree on how to make private property rights respected, be that through state institutions or through the non-aggression principle as a moral value held by individuals can be regarded as precarious. The feeling of urgency on the issue

of acting on environmental issues is widespread, yet FME is still differing on the fundamental question regarding property. This can be perceived as discrediting and exclude FME advocates from the discussion on urgent environmental policies.

Nonetheless, despite the views expressed in FME, which are off the mainstream, it provides a necessary incentive for policy makers to take a step back and re-evaluate if current policies are effective not only on their intentions, but also on their results.

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