

Article

Efficient Property Rights & Human Development

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Abstract: This study investigates the interplay between human development and the efficiency of property rights, emphasizing their role in the sustainable management of natural resources. The research highlights the limitations of property rights frameworks, particularly for open-access resources, such as the Buriganga River in Bangladesh. Primary data were collected through interviews and questionnaires with 30 participants from diverse socioeconomic backgrounds, complemented by secondary research from scholarly texts and reports. Findings reveal that the lack of human development—manifested through low education, poor awareness, and limited social responsibility—hinders the effective application of property rights and contributes to resource degradation. The study validates the hypothesis that well-defined property rights alone are insufficient without parallel advancements in human development. It recommends incorporating awareness programs, practical applications, and collaborative efforts between the state and the public. The paper concludes that fostering human development is essential for achieving sustainable resource management and broader economic growth.

Keywords: Human Development, Natural Resources, Property Rights.

1. Introduction

Market is an institution in which individuals or firms exchange not just common commodities, but the rights to use them in a particular number of times (gravelle, Hugh: and Ray rees, 2004). Supply and demand for goods determine the output level of any production. The terms market clearance and market failure are determined by the quantity supplied and quantity demand of any market. When both the quantity supplied and quantity demand meet equilibrium point it gives the indications that the market is working efficiently. The factors of production play a very important role in any production, legally any individual can own these factors of production and that is referred as the property right. These rights give the chance to manipulate and influence the market as by controlling the factors of production. That leads to an inefficient market or a market failure.

In the case of natural resources, these are hardly exchangeable so no such market exists where both parties meet and exchange. Moreover unsustainable uses of these natural resources are causing pollution, over exploitation and degradation of our environment. One of the major sources of environmental problem is market failure.

Literature review

In theory, an efficient allocation and use of all the resources would lead to a successful market system. Thus, the economy will face overall growth. A set of well define property rights acts as a catalyst in that allocation process. Private property rights assign

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individuals to Control certain resources including rights to charge themselves. Accurate use of property rights can ensure that proper allocation of the natural resources

In the real world, the economy does not go through such simple prototype. In the real economy we find it very hard to allocate all the available resources, it becomes more difficult when one deals with natural resources. To ensure a proper and efficient use of those resources thus is more complicated.

The concrete dissimilarity between the theory and real economy is the population who are the major active element in any economy .the population acts as a crucial tool regarding allocation process. Thus the successful process of allocating resources depends the population the population who are the key factor in the efficient allocation process is often found to be less attentive. The reason is behind such misfortune could be various, starting from their ignorance due to little or no education to be more involved in earning their living. The fact that a major part of the population lives under the poverty line doesn't seem much is of assistance also. So to understand the nature of human development we need to study the population more deeply. Therefore my objectives of this study are-

- To know more about the involved population and their behavioural patterns.
- To understand their development level as in human development level.
- To find and analyse those findings.

Theoretical study: Property rights

Optimal resource allocation in a market economy necessitates the presence of efficient property rights, which are characterised by three specific criteria (Tietenberg 2000):

A proficient property rights framework possesses three primary attributes:

- **Exclusive:** All advantages and expenses associated with the ownership and utilisation of the resource should be attributed to a single owner. Property owners own comprehensive information regarding their respective properties. Understanding all pertinent facts, including the advantages and expenses associated with the property, mitigates issues arising from several owners vying for the asset. It also mitigates the issue of multiple proprietors failing to invest in sustainable management techniques.
- **Transferable:** All property rights must be transferable from one owner to another via lease, sale, or bequest in a voluntary exchange. This mitigates the issue of proprietors refraining from investing in resource enhancements due to uncertainty regarding the realisation of future advantages.
- **Enforceable:** Property rights must be safeguarded against involuntary appropriation or infringement by third parties. Where property rights cannot be enforced or where the threat of expropriation is high,

Owners may not invest in resource improvements and conservation.

A well delineated system of property rights incentivises effective resource utilisation and investments in sustainable management methods. Market failure may arise in the absence of one or more of these prerequisites. Efficient property rights do not, however, ensure superior management in every instance (Pearce 1990).

Tietenberg asserts that an owner of a resource with well defined property rights possesses a strong motivation to utilise that resource efficiently, as a decrease in its value signifies a personal loss.

Alternative Systems of Property Rights:

The region encompasses four principal forms of property rights regimes: open access, communal lands, private property, and state property.

Open access:

Open access exemplifies a quintessential instance of common property ownership characterised by degradation. Property rights pertaining to the resource (land, fish, etc.)

are typically non-exclusive and generally non-transferable. Unregulated access renders property rights unenforceable. Individual users do not consider the expense of ownership. Consequently, no incentives exist for individuals to act responsibly. The logical conduct of users is to utilise the resource to its fullest extent prior to others. In this scenario, the resource may be overexploited, leading to a potential collapse of stocks. Instances in the eastern and southern regions of Africa encompass the exploitation of offshore and inland resources, deforestation, overgrazing of communal areas, and the poaching of the Black Rhino. The utilisation of open access common property resources is frequently linked to institutional and implementation failures. Local legislation and policy regulating resource management may be underdeveloped and poorly executed.

Lake Victoria is a transboundary water body shared among Kenya, Uganda, and Tanzania. It is the largest freshwater lake in Africa. The lake offers a fertile environment for fish cultivation. Over time, the diversity of fish species has diminished, resulting in a predominance of three species. This shift results from human fishing activities, pollution, and the introduction of a species that has become dominant. The projected maximum sustainable yield is roughly 31,000 tonnes annually. Since 1981, annual harvests have surpassed this sustainable threshold. The yearly fish harvest in 1991 was over 180,000 tonnes. Fishing remains quite lucrative; nonetheless, the average catch per unit of effort for several key species has been consistently declining since 1986. These are evident indicators of overexploitation, primarily attributable to insufficient property rights concerning the resource.

Communal property

Under communal property rights, a community or group of users has resources through de facto ownership. The land or its resources may be owned by the state, although local populations oversee its management and utilisation. A common error among policymakers is the assumption that community property arrangements invariably result in resource deterioration. This statement is inaccurate: several instances of effective and sustainable resource management exist within a shared property rights framework. The "Campfire" initiative designed for collective wildlife management in Zimbabwe serves as an exemplary model. In contexts where resource utilisation is effectively regulated, property rights are often exclusive, transferable, and enforceable. It is imperative that access by "outsiders" is regulated. Effective communal resource management is frequently associated with robust cultural and traditional practices. The community property system may still experience failure. Nonetheless, if there is a transition towards economic output instead of subsistence farming, certain individuals within the group may exploit the system to augment their personal revenues. Furthermore, elevated population growth and resource demand may eventually surpass sustainable supply levels from the finite resources managed communally. In either scenario, introducing cattle to a restricted grazing region or increasing deforestation in a specific forest may ultimately exert excessive pressure on the resource base, resulting in deterioration.

State property

In the majority of countries within the region, the government maintains ownership of most natural resources. Examples encompass state forests, national parks, inland waters, and agricultural and rangeland managed communally. The ownership of legal resources and the authority for their management reside with the state. The state may distribute resource utilisation via leases (for timber rights, safari areas, agriculture), permits (for hunting, fishing, fuelwood, mining), quotas (for fishing, timber, and wildlife), and in the context of communal lands, recognise traditional management rights and decisions regarding resource allocation. Sustainable resource management may not consistently take place on state properties and could come to resemble an open access scenario. Several factors contributing to this market failure include:

Access control is not implemented (institutional deficiency)

The oversight of resource utilisation by government entities may be inadequate due to institutional breakdown.

Corruption within government can result in excessive resource exploitation, while significant population pressure in adjacent regions may lead to unlawful resource utilisation.

Private ownership

When the last three conditions for efficient property rights (exclusive, transferable, enforceable) are satisfied, the likelihood of sustainable private resource management increases significantly. Most individuals will behave sensibly and prefer conservation when efficient property rights are established. Nonetheless, circumstances may emerge under private ownership that might lead to resource degradation. Initially, resource owners may encounter ambiguity regarding the sustainability of their long-term ownership. If land expropriation were a potential future consequence (due to the ambiguity of transferable rights), most reasonable owners would refrain from investing in the enhancement of their resources. Numerous large-scale commercial farmers in Zimbabwe confront uncertainty due to the government's 1998 decision to designate specific farms for resettlement. This has resulted in a reduction of capital investment in the sector. Secondly, monitoring extensive private land holdings can be challenging and costly. Neglecting to limit access by external parties can result in an open-access dilemma (enforcement failure). Illegal harvesting of timber or wildlife on extensive private farms is an example. Third, proprietors may only react to governmental decisions concerning land utilisation, pricing, and export incentives. For instance, agricultural proprietors can over utilise chemical inputs or discharge wastewater if they are subsidised by the government. Furthermore, agricultural producer prices and government policies favouring export products may affect crop selection, leading to an inclination towards cash crops like tobacco, which require greater nutrient and water inputs. Ultimately, landowners may lack the technical expertise to sustainably manage their natural resources and environment.

Market system:

A market is an entity in which buyers and sellers fulfil their respective needs. In a free market, the pricing of products and services are determined by the mutual agreement of buyers and sellers. In a free-market system, buyers and sellers neither deceive one another nor are pressured by a third party.

The interplay of supply and demand for an item or service dictates the market's efficiency status. Supply and demand are perpetually equal, as they represent two facets of the same set of transactions; discussions of 'imbalances' are a convoluted and indirect reference to pricing. When demand surpasses supply, suppliers may increase prices. Affluent consumers may continue to purchase the premium items. As prices escalate, suppliers may opt to augment output, or additional providers may enter the market.

The law of supply and demand dictates the concept of a market. Modulating prices to achieve an equilibrium that reconciles the demand for commodities with their supply. The price at which quantity demanded equals quantity provided is referred to as the ideal choice, and this condition is known as the equilibrium point. This scenario is referred to as the market clearance situation.

The market clearance condition may give rise to additional circumstances due to numerous factors. Market failure is a condition in which the allocation of resources is inefficient. This might be perceived as a situation when the initial pursuit of self-interest results in adverse outcomes for society at large. In mainstream analysis, such a scenario may arise for three primary reasons.

An agent in a market can acquire market power, enabling them to obstruct other mutually advantageous trading opportunities. This inefficiency arises from imperfect competition.

Secondly, an agent's actions can generate externalities that are inherent to manufacturing methods or other significant market conditions.

Ultimately, particular markets may fail due to the characteristics of specific items or the structure of their trade. Generally, any of these scenarios can lead to inefficiency and hence result in market failure. The fundamental reason of market failure frequently pertains to issues related to property rights, as articulated by Hugh Gravelle and Ray Rees.

A market is an institution where individuals or corporations exchange not just commodities but also the rights to utilise them in certain manners for designated durations. Markets are institutions that facilitate the exchange of ownership of commodities, with the nature of ownership determined by the property rights associated with those commodities.

Consequently, an agent's control over the utilisation of their commodities may be flawed, as the system of rights delineating that control is deficient. This generally pertains to two broad rights: excludability and transferability. Excludability pertains to an agent's capacity to regulate the usage of their commodity and the duration of such use, together with the associated costs. Transferability denotes an agent's authority to convey usage rights from one party to another, for as through the sale or lease of a commodity, together with the related expenses. If a particular system of rights fails to ensure these at minimal cost, the outcomes may be inefficient.

Natural resources: open access property

Accurate use of property rights can ensure that proper allocation of the natural resources. But another major fact is that most of the natural resources fall under the category of open access property regime. As by definition the natural resources are not transferable or neither have, they had exclusive rights. So the individuals do not act responsibly. In most cases the natural resources are used in an unsustainable way.



a) Natural resources.

Also most of the natural resources such as water, land are being over exploited .as a result environmental degradation occurs.

When natural resources are not allocated efficiently all these sorts of problems occurs. Such situation is referred as market failure.

2. Materials and Methods

The paper is based on mainly Primary research .All the primary data are collected from direct interview and questionnaire interview from a sample size of 30.The secondary research is based on secondary data collected from various text books, journals, internet and other research papers.

Private property rights assign individuals to control certain resources including rights to charge themselves. Accurate use of property rights can ensure that proper allocation of the natural resources. The property right gives the chance to manipulate, influence the market by controlling the factors of production. A successful application of property rights will ensure evident macro-economic growth in any country. The powers that property rights offer are of great responsibility.

There are no doubt that property rights are effective in the case of exclusive properties like house, cars etc. but for open access properties it cannot ensure their efficient allocation. Most of the natural resources fall under the category of open access property.

Exploitation of natural resources has severe impact not only on the environment but also on the economy and human lives. Proper preservation and efficient utilization of natural resources can determine the level of economic growth of any nation. Therefore it is very easy to assume that human development is a key factor in the successful application of property rights and thus economic growth.

A major fact is that most of the natural resources fall under the category of open access property regime under which they don't have the privilege of being an exclusive resource.

Human development:

The concept of human development was first given an official importance in the Johannesburg declaration 2002. Human development is about creating a world where all human will have opportunity to fulfil their potential and lead a healthy and happy life.

In the past development was measured only in economic terms but the concept of human development encompasses so much more than financial status. Nutrition, proper education, sense of responsibility, proper awareness, decent standard of living- all are the essential to the concept,

The future of our economy and environment lays on the hand our population, this concept was clearly understood by the leaders and thus was given much importance in the earth summit. The declaration clearly states a commitment to build a human, equitable and caring global society cognisant of the need for human dignity for all. The to carry out the regulations, property rights efficiently the involved agents (public) must be skilled with the proper knowledge. A concern mind and awareness thus are primary component for human development level.

The developed countries that are the north countries are already step ahead in the human development process. To achieve development, we the south may ask for financial supports and technological sharing; but unless the population itself are not aware, conscious or educated then all those helps will just go in mislay.

Therefore, human development is a key component in the development process.

Research Hypothesis:

"Well define property rights cannot ensure efficient utilization of natural resources without the accomplishing human development."

3. Result and Discussion

For this study the chosen open access property is the Buriganga River. To collect the primary data a sample size of 30 people was interviewed. The sample included general people from all areas of the original population.

To ensure accurate extent of human development level the population sample had both the locals who live and earn their living from the river, and people from other parts of the economy. The questions are mostly open-ended questions.

From 30 interviewees are divided into two categories based on the different background, social living standards. These two categories are lower class to below middle

class, and middle class to upper class. The second category then again is divided based on awareness level of the interviewees.

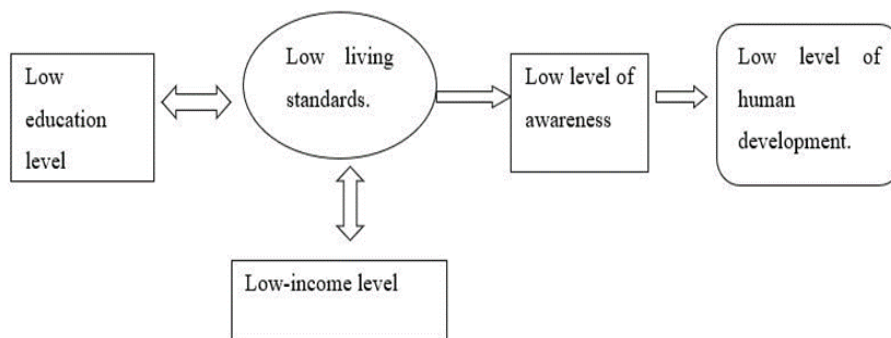
The level of awareness is chosen because it reflects the human development level of the society. Human development also includes proper level of education, sense of social responsibility, significant level of awareness etc.

The divided interviewees and their given answers along with their questionnaire number are given.

Table 1: category 1.

	Key characteristics of the group	Key findings from their answers
Low-living standards	# Low education level. #Low-income jobs (guard, cleaner, house maids, driver) # Low to little level of awareness.	# Contaminated river water. # Illegal construction. # Health problems. # Government is responsible. # Government should maintain.

Flow chart.1: relationship between low living standard and low level of human development



Findings from category 1-

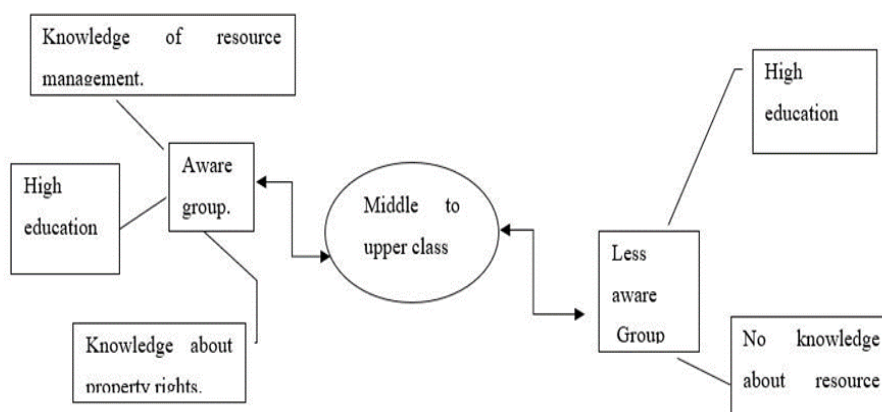
In this category there were five interviewees, out of them two were female and three were male. All of them were engaged in jobs that provide only low level of income.

The interviewed people know a little about the present state of the Buriganga River, but they only know that the water is dirty and smells bad. They are not eager to find out more about the problem .They think the Government it the only one to blame, Government is the owner of the river. Most of all, they are more interested to earn their livelihoods.

Table 2: category 2:

Middle –upper class.	Key characteristics.	Key findings
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(less aware)	<ol style="list-style-type: none"> 1. High level of institutional educational background. 2. Belong from middle to upper class families. 3. Less or no knowledge about resources protection, utilization. 	Polluted river Government, mills are to blame. Threat to human health No knowledge about property rights.
Middle- upper class. (highly aware)	<ol style="list-style-type: none"> 1. High level of education with experience of resource related job. 2. Belongs from middle- upper class families. 3. had environment or economics or nature related educational background. 	Polluted river, vandalized eco system, degradation of the river. The government, public, DCC, all are to blame. The equal responsibility. .Fair level of knowledge about property right



Flow chart 2: Aware and less aware group from educated background.

Findings from Category 2:

Nine of the interviewees belongs from background with knowledge of property rights, resource utilization. They are aware of the polluted state of the river. Also is concerned about the river exploitation, and the threat that eco-system faces

This aware group spots the government for failing to maintain the public property, the public for being less aware and other organization for unplanned construction etc.

They suggest a joint force of government, public participation along with other organization to work in the maintaining the river.

Significant pressure is put on the concept of promote the concept of property rights, efficient use of resource, economic growth, and also to create awareness among the public.

Other sixteen were found with adequate level of educational background but without any idea about the property rights concept.

These people also belong from middle to upper class of the society; however they are less concerned about problems like inefficient management of resources, less economic growth or public responsibility.

Although these people had the option to develop their social capabilities and raise the level of human development, but they are just not aware of this fact.

Summary of the observation

The main aim of this study was to find out the real scenario regarding the efficiency of property rights in our country especially in the case of open access properties. As most of the natural resources falls under this category a common property, the Buriganga River was chosen. The sample size included general people from both the lower and higher society

Parts. The focused group has been tried to exclude experts from property rights regime fled.

In the recent decades a new concept has become very popular, that is human development.

In the neoclassical thoughts that dominant paradigm argued that the population is the ultimate resource. With time alternative paradigm came along, with the concept that population should act responsible, unless they cannot have efficient utilization of resources. The success of a market system depends on proper efficient allocation, use of all the resource.

With time it was evident that along education is not enough to ensure proper use of the regulations, property rights etc. today we need to development of human, by developing their sense of responsibility, understandings about sustainable approach, awareness level etc.

To check the and compare the human development level from Bangladesh perspective, and sample size of 30 was chosen.

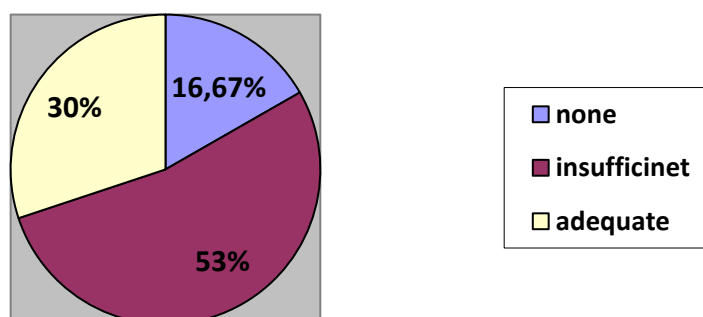


Figure 1 : human development level from the sample

From the total population of 30, 5 or 16.67% was found to have no level of human development. Out of total 30, 53% had too little or insufficient level of human development. Only 30% or 9 out of total 30 has adequate level of human development in them .

Human development is development of certain capabilities.

The sample and the study show that from total population of 30 only 30% of them can be identified to have human development in an adequate level.16.67% totally lacks

the human development quality. Thus awareness about the necessary issue is also absent in them.

Hypothesis comparison:

As my research was qualitative research I have use qualitative questions .After coding the gathered answer from the sample group , certain assumption was clearly found, as given before.

The hypothesis was that , Without human development efficient use of property rights is not possible.

The findings supports this hypothesis , as the sample shows that a major part of the population lack the sense of responsibility towards the public properties, along with that there is also exists lack of awareness. All these are key element of human development. Without human development, sustainable development is not possible, nor efficient application of the property rights can happen

So my hypothesis regarding the behavioral attributes of the chosen sample size it tested as true.

Recommendation:

The process of human development is very important in today's world , so this process should be adopted as soon as possible.

Even the classical education system lacks the process of creating awareness, sharing information about topics such as property rights and it's relation to market failure, sustainable approach to development etc. these should be started at the early stage of education.

Only a clearly defined set of property rights is not enough to ensure the efficient utilization of properties, therefore the practical side should also be focused.

Practical application needs to give more importance.

Public participation and non-state involvement along with the state should also be given importance.

4. Conclusion

The main purpose of my research was to do a reality check on the property rights and public property situation in Bangladesh. like other developing countries , we are trying out best to climb up the ladder of development as far as we can. But it seems that we are ignoring the more important side of development, that is sustainability of the world.

Our country has a vast range of natural resources, that falls under the category of public property. And though we have certain property rights related to this specific type of assets; application of this regulation are not easy .

On top of that the public plays a very important role in effective property rights action.to underline the relation of impact public action on the efficiency level of property rights was the main aim of this paper.

To conclude, it can be said that human development is the key to an efficient property rights application , and also to achieve development in a sustainable way.

REFERENCES

- [1] Tietenberg, T. (2003). Environmental and Natural Resource Economics. India: Dorling Kindersley Pvt. Ltd.
- [2] Forum for Economics and Environment. (n.d.). Training Manual -1.

- [3] HerTick, B. (1994). Market Failure and Policy Failure in Alleviating Urban Education and Social Policy. Department of the World Bank.
- [4] Wikipedia. (2010). Market Failure. Retrieved July 28, 2010, from <http://www.wikipedia.com>.
- [5] Doshomik. (2010). Bangladesh River Pollution. Retrieved July 16, 2010, from <http://www.doshomik.net>.
- [6] Water Wiki. (2010). Facing Water Challenges in Bangladesh at the Confluence of the Ganges, Brahmaputra, and Meghna Rivers: A WWDR3 Case Study. Retrieved July 16, 2010, from <http://www.waterwiki.net>.
- [7] Bangladesh News. (2010). Rivers of Pollution Surrounding Dhaka. Retrieved July 16, 2010, from <http://www.bangladeshnews.com.bd>.
- [8] The Daily Star. (2009, April 3). The Star: Stories Behind the News. Buriganga's Burden: Can Dhaka's Lifeline Be Revived? A weekly publication of The Daily Star.
- [9] Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. London: Sage Publications Ltd.
- [10] Glaser, B. G. (1978). *Theoretical Sensitivity: Advances in the Methodology of Grounded Theory*. Mill Valley, CA: The Sociology Press.
- [11] Glaser, B. G., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago, IL: Aldine Publishing Co.
- [12] Locke, K. (2001). *Grounded Theory in Management Research*. London: Sage Publications Ltd.
- [13] Closas, A. (2020). Groundwater governance: Addressing core concepts and challenges. *Wiley Interdisciplinary Reviews: Water*, 7(1). <https://doi.org/10.1002/WAT2.1392>
- [14] Dressel, S. (2018). Mapping social-ecological systems to understand the challenges underlying wildlife management. *Environmental Science and Policy*, 84, 105–112. <https://doi.org/10.1016/j.envsci.2018.03.007>
- [15] Fan, P. (2017). Nature-based solutions for urban landscapes under post-industrialization and globalization: Barcelona versus Shanghai. *Environmental Research*, 156, 272–283. <https://doi.org/10.1016/j.envres.2017.03.043>
- [16] Orlandi, V. T. (2022). Bacterial pigments: A colorful palette reservoir for biotechnological applications. *Biotechnology and Applied Biochemistry*, 69(3), 981–1001. <https://doi.org/10.1002/bab.2170>
- [17] Pascual, U. (2023). Diverse values of nature for sustainability. *Nature*, 620(7975), 813–823. <https://doi.org/10.1038/s41586-023-06406-9>
- [18] St-Laurent, G. P. (2017). Barriers to the development of forest carbon offsetting: Insights from British Columbia, Canada. *Journal of Environmental Management*, 203, 208–217. <https://doi.org/10.1016/j.jenvman.2017.07.051>
- [19] Svensson, J. (2021). How does hybrid environmental governance work? Examining water rights trading in China (2000–2019). *Journal of Environmental Management*, 288. <https://doi.org/10.1016/j.jenvman.2021.112333>
- [20] Tsioumani, E. (2018). Beyond access and benefit-sharing: Lessons from the law and governance of agricultural biodiversity. *Journal of World Intellectual Property*, 21(3), 106–122. <https://doi.org/10.1111/jwip.12094>
- [21] Tura, H. A. (2018). Land rights and land grabbing in Oromia, Ethiopia. *Land Use Policy*, 70, 247–255. <https://doi.org/10.1016/j.landusepol.2017.10.024>