

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS



Open Access, Refereed Journal Multi Disciplinary
Peer Reviewed Edition :

www.ijlra.com

DISCLAIMER

No part of this publication may be reproduced or copied in any form by any means without prior written permission of Managing Editor of IJLRA. The views expressed in this publication are purely personal opinions of the authors and do not reflect the views of the Editorial Team of IJLRA.

Though every effort has been made to ensure that the information in Volume 2 Issue 7 is accurate and appropriately cited/referenced, neither the Editorial Board nor IJLRA shall be held liable or responsible in any manner whatsoever for any consequences for any action taken by anyone on the basis of information in the Journal.

Copyright © International Journal for Legal Research & Analysis

IJLRA

EDITORIAL TEAM

EDITORS



Megha Middha

Megha Middha, Assistant Professor of Law in Mody University of Science and Technology, Lakshmangarh, Sikar

Megha Middha, is working as an Assistant Professor of Law in Mody University of Science and Technology, Lakshmangarh, Sikar (Rajasthan). She has an experience in the teaching of almost 3 years. She has completed her graduation in BBA LL.B (H) from Amity University, Rajasthan (Gold Medalist) and did her post-graduation (LL.M in Business Laws) from NLSIU, Bengaluru. Currently, she is enrolled in a Ph.D. course in the Department of Law at Mohanlal Sukhadia University, Udaipur (Rajasthan). She wishes to excel in academics and research and contribute as much as she can to society. Through her interactions with the students, she tries to inculcate a sense of deep thinking power in her students and enlighten and guide them to the fact how they can bring a change to the society

Dr. Samrat Datta

Dr. Samrat Datta Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Samrat Datta is currently associated with Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Datta has completed his graduation i.e., B.A.LL.B. from Law College Dehradun, Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand. He is an alumnus of KIIT University, Bhubaneswar where he pursued his post-graduation (LL.M.) in Criminal Law and subsequently completed his Ph.D. in Police Law and Information Technology from the Pacific Academy of Higher Education and Research University, Udaipur in 2020. His area of interest and research is Criminal and Police Law. Dr. Datta has a teaching experience of 7 years in various law schools across North India and has held administrative positions like Academic Coordinator, Centre Superintendent for Examinations, Deputy Controller of Examinations, Member of the Proctorial Board



Dr. Namita Jain



Head & Associate Professor

School of Law, JECRC University, Jaipur Ph.D. (Commercial Law) LL.M., UGC -NET Post Graduation Diploma in Taxation law and Practice, Bachelor of Commerce.

Teaching Experience: 12 years, AWARDS AND RECOGNITION of Dr. Namita Jain are - ICF Global Excellence Award 2020 in the category of educationalist by I Can Foundation, India. India Women Empowerment Award in the category of "Emerging Excellence in Academics by Prime Time & Utkrisht Bharat Foundation, New Delhi.(2020). Conferred in FL Book of Top 21 Record Holders in the category of education by Fashion Lifestyle Magazine, New Delhi. (2020). Certificate of Appreciation for organizing and managing the Professional Development Training Program on IPR in Collaboration with Trade Innovations Services, Jaipur on March 14th, 2019

Mrs.S.Kalpana

Assistant professor of Law

Mrs.S.Kalpana, presently Assistant professor of Law, VelTech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, Avadi. Formerly Assistant professor of Law, Vels University in the year 2019 to 2020, Worked as Guest Faculty, Chennai Dr.Ambedkar Law College, Pudupakkam. Published one book. Published 8 Articles in various reputed Law Journals. Conducted 1 Moot court competition and participated in nearly 80 National and International seminars and webinars conducted on various subjects of Law. Did ML in Criminal Law and Criminal Justice Administration. 10 paper presentations in various National and International seminars. Attended more than 10 FDP programs. Ph.D. in Law pursuing.



Avinash Kumar



Avinash Kumar has completed his Ph.D. in International Investment Law from the Dept. of Law & Governance, Central University of South Bihar. His research work is on "International Investment Agreement and State's right to regulate Foreign Investment." He qualified UGC-NET and has been selected for the prestigious ICSSR Doctoral Fellowship. He is an alumnus of the Faculty of Law, University of Delhi. Formerly he has been elected as Students Union President of Law Centre-1, University of Delhi. Moreover, he completed his LL.M. from the University of Delhi (2014-16), dissertation on "Cross-border Merger & Acquisition"; LL.B. from the University of Delhi (2011-14), and B.A. (Hons.) from Maharaja Agrasen College, University of Delhi. He has also obtained P.G. Diploma in IPR from the Indian Society of International Law, New Delhi. He has qualified UGC - NET examination and has been awarded ICSSR - Doctoral Fellowship. He has published six-plus articles and presented 9 plus papers in national and international seminars/conferences. He participated in several workshops on research methodology and teaching and learning.

ABOUT US

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS
ISSN

2582-6433 is an Online Journal is Monthly, Peer Review, Academic Journal, Published online, that seeks to provide an interactive platform for the publication of Short Articles, Long Articles, Book Review, Case Comments, Research Papers, Essay in the field of Law & Multidisciplinary issue. Our aim is to upgrade the level of interaction and discourse about contemporary issues of law. We are eager to become a highly cited academic publication, through quality contributions from students, academics, professionals from the industry, the bar and the bench. INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 welcomes contributions from all legal branches, as long as the work is original, unpublished and is in consonance with the submission guidelines.

EMERGING LEGALITIES SURROUNDING METAVERSE: CASE STUDY OF TUVALU

AUTHORED BY: NIMMY TONY & DR SUPERNA VENAİK

ABSTRACT

The Metaverse has emerged as the new reality in the contemporary digital era by making the alternative virtual world where people can establish relationship, carry out business transactions, boost the learning and many more. This study aim to delve into the legal intricacies of Tuvalu as a metaverse platform, covering areas such as jurisdiction, intellectual property, privacy, regulatory compliance, financial regulations, dispute resolution, and user governance. Conducting research on these questions can provide valuable insights into the legal challenges and opportunities presented by virtual environments like Tuvalu.

As Tuvalu grapples with the impacts of climate change, accurately representing its physical environment within a metaverse may become increasingly challenging. Rising sea levels could alter coastlines and threaten infrastructure, requiring constant updates and adaptations in virtual representations.

The objective of this study is to comprehensively analyze the legal landscape of Tuvalu, identify key legal challenges and risks, and propose recommendations for enhancing the platform's legal framework to promote compliance, mitigate risks, and safeguard the rights and interests of users and stakeholders.

This study is based on a doctrinal method of collection of data. This study is descriptive in nature and many secondary data sources have been utilized for deep analysis of metaverse and its key issues and challenges. The findings of this study will contribute to a deeper understanding of the legal dimensions of metaverse platforms like Tuvalu and provide actionable recommendations for improving legal compliance, enhancing user protection, and fostering a more robust and sustainable virtual ecosystem.

Tuvalu's cultural identity is closely tied to its natural environment. As climate change

threatens traditional ways of life and cultural heritage sites, there could be a risk of cultural erosion. Incorporating efforts to preserve and showcase Tuvalu's cultural heritage within the metaverse would be crucial. Addressing these challenges would require a comprehensive approach, involving collaboration between government, technology companies, environmental organizations, and local communities. The goal would be to leverage the potential of the metaverse while ensuring it aligns with Tuvalu's sustainability and climate resilience objectives.

Addressing these legal considerations requires collaboration between policymakers, legal experts, technology companies, and other stakeholders to develop appropriate regulations and guidelines for the evolving metaverse landscape. Additionally, as the metaverse continues to evolve, it's likely that new legal challenges and regulatory frameworks will emerge, necessitating ongoing adaptation and innovation in legal approaches.

INTRODUCTION

The concept of the metaverse, a virtual universe where users can interact with each other and digital environments in real-time, has gained significant attention in recent years. With advancements in virtual reality, augmented reality, blockchain technology, and online gaming, the metaverse is increasingly becoming a tangible reality rather than a mere futuristic concept.

As the metaverse evolves, it raises numerous legal and regulatory questions that require careful consideration. Just like any other virtual or digital space, the metaverse presents unique challenges related to intellectual property rights, privacy concerns, cybersecurity, virtual property ownership, jurisdictional issues, and many more.¹

This study aims to provide a broad overview of the legal landscape surrounding the metaverse, exploring key legal principles and challenges that arise within this digital realm. Understanding the legal framework of the metaverse is essential for policymakers, businesses, developers, and users alike to navigate this evolving landscape responsibly and ethically. This study also will delve deeper into various legal aspects of the metaverse, examining how existing laws apply, identifying gaps in regulation, and discussing potential

approaches to address emerging legal issues.

Because of its low-lying geography, Tuvalu is particularly vulnerable to the effects of climate change, including rising sea levels and extreme weather events. This has made issues like environmental conservation and sustainable development crucial for the nation's survival. In recent years, Tuvalu has been active in international forums advocating for climate action and greater assistance for vulnerable island nations. It's also heavily reliant on international aid and remittances, with fishing and the sale of internet domain names being among its main sources of income. ²

¹ Basu, Tanya. "The Metaverse Has a Groping Problem Already." MIT Technology Review, 2022

² <https://www.eco-business.com/news/tuvalu-preserves-history-online-as-rising-seas-threaten-existence/>

CASE STUDY OF TUVALU

Tuvalu is a small island nation in the Pacific Ocean facing the threat of rising sea levels. By 2050, it is estimated that half the capital, Fongafale, will be flooded by tidal waters. The Tuvalu government and UNDP are developing a Long-Term Adaptation Plan (L-TAP) to provide comprehensive national solutions to sea level rise beyond 2100.³

The country faces significant challenges related to climate change. Rising sea levels, increased frequency of extreme weather events, ocean acidification, and coral bleaching are some of the primary concerns for Tuvalu and other low-lying atoll nations.

Tuvalu's drive to turn into the world's most memorable digital country is both imaginative and vital given the existential danger it faces from rising ocean levels. Utilizing the metaverse to safeguard its social legacy and guarantee its kin can flourish regardless of actual difficulties is a ground breaking approach.

By embracing digital advancements, Tuvalu can make virtual portrayals of its islands, permitting its residents to proceed with their lifestyle even as their actual climate changes. This drive could likewise give financial open doors, like virtual the travel industry and remote work, assisting with supporting the country's economy notwithstanding ecological difficulty.

Serve Kofe's declaration at COP27 highlights the criticalness of the circumstance and Tuvalu's obligation to tracking down imaginative arrangements. It additionally features the significance of worldwide collaboration in tending to environmental change and supporting weak countries like Tuvalu.

This drive could act as a model for other low-lying island countries confronting comparative difficulties, showing the way that technology can be outfit to adjust to an impacting world while protecting social personality and legacy.

Kofe's statement encapsulates the essence of Tuvalu's digital initiative and the profound significance it holds for the nation's survival and cultural preservation. By moving its most precious assets – land, ocean, and culture – to the digital realm, Tuvalu aims to ensure their safety and continuity in the face of environmental challenges.

The metaphor of "moving to the cloud" symbolizes the transition of Tuvalu's physical existence to the virtual space of the metaverse, where its unique identity and heritage can be safeguarded from the impacts of climate change. This shift reflects the resilience and adaptability of Tuvalu's people, who are embracing technology as a means of preserving their way of life.

³ <https://www.weforum.org/agenda/2023/07/tuvalu-l-tap-technology-sea-level-rise-undp/>



Kofe's speech from the metaverse underscores the transformative potential of digital technology in addressing the existential threats posed by climate change. By utilizing virtual reality and other digital tools, Tuvalu can recreate its islands, ocean ecosystems, and cultural practices, allowing its people to maintain a connection to their homeland even as it changes physically.

The collaboration between Agency The Monkeys and Collider highlights the importance of partnerships and collective action in addressing complex challenges like preserving cultural heritage in the face of climate change. Their efforts will contribute to the resilience and vitality of Tuvalu's culture, ensuring that it endures for future generations, both in the physical world and in the digital realm of the metaverse.

While Tuvalu will be the principal digital country, different urban communities and nations have plans to use the metaverse. For instance, the city of Seoul anticipates utilizing the metaverse to give admittance to public administrations, occasions, and verifiable destinations, and the country of Barbados declared its objective to have the digital consulate.⁴ The adoption of the metaverse for hosting events like South by Southwest 2021 and the world's first fashion week in Decentraland demonstrates the growing trend of utilizing virtual spaces for immersive experiences. These events showcase the potential of the metaverse to recreate real-world environments and activities in digital form, offering new opportunities for engagement and interaction.

South by Southwest's virtual edition in 2021, which utilized VRChat and VRrOOM to create a digital rendition of Austin and the event, allowed participants to explore virtual venues, attend panels and performances, and connect with others from around the world. This innovative approach not only provided a solution to the challenges posed by the COVID-19 pandemic but also opened up new possibilities for extending the reach and impact of the event beyond physical constraints.

Similarly, Decentraland's hosting of the world's first fashion week in the metaverse showcased the potential of virtual reality for reimagining traditional experiences like runway shows and shopping. Attendees could participate in virtual runway shows, browse virtual collections, and even attend afterparties, all from the comfort of their own homes. This event

exemplifies how the metaverse can blur the lines between physical and digital experiences, offering new avenues for creativity and expression.⁵

⁴ <https://www.tomorrowstoday.com/smart-technology/tuvalu-to-become-the-worlds-first-digital-country-in-the-metaverse/>

⁵ Lucy Craymer , Tuvalu turns to the metaverse as rising seas threaten existence, Reuters, 2022



As Tuvalu grapples with the impacts of climate change, accurately representing its physical environment within a metaverse may become increasingly challenging. Rising sea levels could alter coastlines and threaten infrastructure, requiring constant updates and adaptations in virtual representations.

While a metaverse could offer virtual tourism experiences of Tuvalu's natural beauty, there's a risk that it might overshadow the real-world struggles the nation faces due to climate change. Balancing promotion of tourism with awareness of environmental challenges would be essential.⁶

The decision to start the digitalization effort with Teafualiku Islet, the smallest island in Tuvalu, is a strategic move that sets the foundation for the broader project. By creating a digital replica, or "twin," of Teafualiku Islet, Tuvalu can demonstrate the potential of the digital initiative while also preserving the cultural and environmental significance of this particular island.

Regular updates on the project's progress showcased on Tuvalu.tv provide transparency and engagement opportunities for audiences worldwide. This allows people to witness firsthand the transformation of Tuvalu into a pioneering digital nation. By sharing updates through Tuvalu.tv, the project can raise awareness about the challenges faced by Tuvalu and highlight the innovative solutions being implemented to address them.

The creation of a digital twin for Teafualiku Islet serves as a tangible example of how technology can be leveraged to preserve Tuvalu's heritage and adapt to the impacts of climate change. As the project progresses, it will likely inspire other initiatives aimed at digitizing additional aspects of Tuvaluan culture and society, further solidifying the nation's position as a leader in the digital realm.⁷

Issues and challenges

Question of sovereignty

On the other hand, there is some legal and anthropological queries which by default become the parts of the transition. The important question is pertain to the sovereignty of the country: would the sovereignty of Tuvalu be moved to the globe of virtual realities, although the ownerships of Metaverse as the platform lie with US MNCs Meta?

⁶ <https://campaignsoftheworld.com/digital/first-digital-nation-tuvalu/>

⁷ <https://campaignsoftheworld.com/digital/first-digital-nation-tuvalu/>



In the context of a digital nation, sovereignty could be redefined to encompass control over digital assets, governance within virtual spaces, and the ability to regulate activities occurring within those spaces. This could include issues such as data privacy, intellectual property rights, and cybersecurity. However, establishing clear definitions and mechanisms for enforcing digital sovereignty remains a complex and evolving process.

Regarding recognition by UN, the question of whether a digital nation can be officially recognized is subject to debate. The UN typically recognizes sovereign states based on certain criteria, including a defined territory, a permanent population, a government, and the capacity to enter into relations with other states. While a digital nation may meet some of these criteria, such as having a population and governance structure, the lack of a physical territory raises questions about its eligibility for recognition.

Moreover, the UN operates within the framework of international law, which is largely based on principles developed for the physical world. Adapting these principles to the digital realm presents legal and regulatory challenges that have yet to be fully addressed.

If the Metaverse Tuvalu claims sovereignty and establishes a governing mechanism within its virtual realm, it enters into a complex and potentially controversial realm of digital governance. While this assertion of sovereignty and governance within the virtual space is a novel concept, it raises several questions and considerations:

While Metaverse Tuvalu may claim sovereignty within its digital borders, recognition by other nations and international bodies such as the United Nations may be challenging. Traditional concepts of sovereignty are tied to physical territories, and there is currently no established framework for recognizing digital nations.

The legal status of Metaverse Tuvalu's sovereignty and governance mechanisms would need to be defined and recognized within the context of international law. This would likely require the development of new legal frameworks specific to the virtual realm.

Establishing governance mechanisms within the Metaverse Tuvalu would require mechanisms for enforcement, including the ability to regulate behavior, resolve disputes, and enforce laws and regulations within the virtual space. As the Metaverse is a decentralized and interconnected network of virtual spaces, interoperability with other digital platforms

and virtual worlds would need to be considered. This includes issues such as data sharing, cross-platform transactions, and compatibility with existing virtual environments.



Ensuring the rights and freedoms of users within the Metaverse Tuvalu, including rights to privacy, freedom of expression, and due process, would be essential for legitimacy and acceptance. Establishing diplomatic relations and engaging with other digital nations, virtual communities, and real-world governments would be necessary for Metaverse Tuvalu to participate in the global community effectively.

While the assertion of sovereignty and governance within the Metaverse Tuvalu represents an innovative approach to digital governance, it raises complex legal, political, and practical challenges that would need to be addressed for it to be widely recognized and accepted within the international community.⁸

Question of ownership

The other question revolves around the virtual platform, knowing that the creation of or even buying of any virtual land is majorly an act of entering into a contract with the platform. Wherein, the supreme ownership still lies with the platform, and a sort of licence is given by the platform to the user to enjoy the services offered by it. Would this not create an ownership problem?

If a digital nation is created on the Metaverse, then Meta Platforms, Inc., a corporation, has ownership of the cultural heritage of Tuvalu and of the nation itself; this hypothetically creates a sovereignty problem, as the ultimate authority on the creation of more land and the software underlying it is with the platform. So if tomorrow, Metaverse stops its services for any reason, the whole cultural identity of the State comes to an end. Thus, there cannot be a digital nation without the services of a platform. This dependency on a corporation subdues to a large extent the sovereign aspect of the State.

A better route towards ensuring a more viable solution for a digital nation will be for it to create servers and an independent digital platform of its own, which will ensure more independence. However, that will require creation of solid data-centres ensuring fluent data-flow as well as electric capacity to maintain such servers, since there is a huge amount of electricity consumption in data centres. Where will these servers and the electricity grid feeding them be housed? In the embassies of Tuvalu?

Question of citizens' rights

⁸ <https://blog.cryptoflies.com/tuvalu-the-nation-preserving-identity-in-the-metaverse-amid-submergence-threat/>



The assertion of sovereignty by Metaverse Tuvalu implies a claim of ownership over the virtual territory and governance mechanisms within its digital borders. However, the recognition and acceptance of this sovereignty by other entities, including real-world governments and international bodies, may vary. Metaverse Tuvalu may establish governance structures and mechanisms to facilitate decision-making and community participation within its virtual space. Ownership and control over these governance mechanisms would likely reside with the governing body or organization responsible for managing Metaverse Tuvalu.

Absolutely, the creation of a separate space within the platform exclusively for citizens of Tuvalu would indeed raise considerations regarding access rights for Tuvaluan citizens. The right to access is indeed a fundamental digital right recognized worldwide, mainly to empower users to understand and control the processing of their data.

In the context of Metaverse Tuvalu, where a digital replica of the physical Tuvalu is being created, citizens of Tuvalu would have a legitimate claim to access their digital representation of their land and cultural heritage. This right to access would empower Tuvaluan citizens to engage with and interact within the virtual space that reflects their real-world identity and environment.

Granting Tuvaluan citizens the right to access their digital replica within the Metaverse Tuvalu aligns with principles of digital rights and sovereignty. It allows citizens to participate in and contribute to the development and governance of their virtual community, ensuring that their cultural heritage and identity are respected and preserved within the digital realm.⁹

Climate Change and the Metaverse,

In the physical world, Tuvalu faces threats from rising sea levels, extreme weather events, and coastal erosion, all of which jeopardize the nation's existence. These challenges are exacerbated by the limited land area and low elevation of the islands, making them particularly vulnerable to the impacts of climate change.

One of the primary objectives of Metaverse Tuvalu is to preserve the cultural heritage and history of Tuvalu in the face of environmental threats. As climate change impacts the physical landscape of Tuvalu, the digital replica within Metaverse Tuvalu serves as a means

of safeguarding the nation's identity and heritage for future generations. Metaverse Tuvalu may also incorporate elements of virtual adaptation to simulate and respond to the effects of climate

⁹ <https://zds.online/en/tuvalu-is-the-first-nation-in-the-metaverse/>



change within the virtual space. This could include virtual scenarios depicting rising sea levels, extreme weather events, and other environmental changes, allowing users to explore and understand the potential impacts of climate change on Tuvalu.

Metaverse Tuvalu can serve as a platform for raising awareness about the impacts of climate change on Tuvalu and advocating for global action to address the underlying causes. By providing immersive experiences and storytelling within the virtual space, Metaverse Tuvalu can engage audiences worldwide in conversations about climate change and its implications for vulnerable communities like Tuvalu.

Metaverse Tuvalu may also facilitate innovation and collaboration in climate change adaptation and mitigation efforts. By bringing together experts, policymakers, and community members within the virtual space, Metaverse Tuvalu can foster dialogue, share knowledge, and develop solutions to address the challenges posed by climate change.¹⁰

This year, the Seoul Metropolitan Government, after its November 2021 declaration about moving a portion of its capabilities into the metaverse, delivered a beta variant of its "virtual civil world" promoted as Metaverse Seoul. As Urban communities Today reports, the city "plans to have a metaverse climate for every single regulatory help, including economy, culture, and the travel industry" set up by 2026.

Tending to the lawful setting of a lowered state will raise novel issues. The issue is especially more important than anything else to Kofe. How is one to manage oceanic limits and the assets situated inside the pertinent waters, despite immersion? What's more, that is only the beginning of it.

This issue has proactively engrossed various legitimate specialists and bodies. In 2012, ILA laid out the Council on Global Regulation and Ocean Level Ascent to concentrate on the potential effects of rising ocean levels and its "suggestions under worldwide law of the halfway and complete immersion of state an area, or eradication thereof, in especially of little island and low-lying states". The second part to the Panel's order is to foster recommendations to foster worldwide regulation with respect to such misfortunes of domain, the effect on sea zones "remembering the effects for statehood, identity and basic freedoms."

The ramifications of such misfortunes are adequately clear. Should the departure of a state to immersion and submergence likewise bring about a deficiency of citizenship? The gamble of

¹⁰ Binoy Kampmark, Tuvalu, Climate Change and the Metaverse, <https://countercurrents.org/2022/11/tuvalu-climate-change-and-the-metaverse/>



statelessness is sufficiently certifiable, and it stays a wellspring of much discussion whether deal regulation or worldwide standard regulation is fit for resolving the issue. As legitimate researcher Marija Dobrić deduces in a recent report, "it is hazy whether individuals impacted might be considered 'stateless individuals' inside the importance of the Shows on Statelessness and, regardless of whether they, how far that would effectively safeguard their privileges really."

Moving the genuine, substantial world to the metaverse with all its true and lawful ramifications will incite various cerebral pains. This close to supernatural change to the ether of the virtual world sounds striking and, in some capacity, hazardously misinformed. It moves one bunch of difficulties for another. Issues of protection (indeed, where did that go?), directing what content goes into such a model, and how individuals are to act, are squeezing focuses that are just not being tended to truly.

Works, for example, Matthew Ball's *The Metaverse: And How It Will Alter Everything*, do essentially nothing to clear this up, zeroing in on something approximating to strict creed. As one analyst precisely puts it, the work not just limits the significance of moral, political and lawful issues yet additionally neglects to address "how to develop the metaverse capably."

The issues of the metaverse, to the extent that they are being verbalized, are in their early stages. In any case, we have seen that modelers of that plan, including such manipulative illuminators as Imprint Zuckerberg, propose that a level of solid doubt is required. The reaction from Tuvalu's legislators is, in some way or another, justifiable: they caused me to make it happen.

Can development in the virtual world be employed by analogy to Tuvalu's 'sinking island'?

Currently Tuvalu has territory. .The idea of issuing NFTs (Non-Fungible Tokens) to represent both actual and virtual real estate, including parcels of land in Tuvalu's case, is intriguing and aligns with the concept of preserving assets in the digital realm as a response to the threat of climate change. By encoding parcels of land as NFTs and representing them on a blockchain, the ownership and provenance of these assets can be securely recorded and

transferred within the virtual space, even if the physical land disappears due to rising sea levels.

However, as you rightly pointed out, one significant challenge associated with NFTs is their high energy consumption, particularly in their current implementation on blockchain platforms



like Ethereum. The process of minting and trading NFTs requires significant computational power, leading to concerns about their environmental impact and carbon footprint.¹¹

The proposed shift by the Law Commission of Britain and Ridges from ownership towards control is likewise a positive move in this regard. Essentially, the acknowledgment that NFTs can fall inside the business area of procurement and deal and can be hung on trust implies that these could 'fit' with existing legitimate structures, for example, the Tuvalu Trust Asset, with the extra defend of blockchain holding. While current exchanges connecting with virtual land may not plan precisely on to the circumstance in Tuvalu, it would be feasible to recognize the actual region and either distribute into plots or offers with not set in stone by the market. Costs paid for these NFTs would then be banked in the Tuvalu Trust Asset.

Be that as it may, where the idea of Digital Country is solid, the informing could be more nuanced. There are three crowds that the Tuvaluan government requirements to adjust: worldwide pioneers who need to focus on discharges decreases, global benefactors who need to put resources into Tuvalu and Tuvaluan residents who need to feel confident and ready for their future. It is hard to discuss actually with one single message to these crowds.

From one perspective, the public authority's informing of Digital Country exhibits to worldwide pioneers the earnestness of outflows decreases by alluding to the 'approaching vanishing' of Tuvaluan islands. However, in doing as such, it takes a chance with making an impression on givers that putting resources into Tuvalu does not merit the gamble, and it makes an impression on residents that there is little expect Tuvalu's future.

There is an open door to assist with keeping a decent life in Tuvalu throughout the following couple of many years, however it requires venture. One review recommends that it has been hard to lay out unfamiliar interest in water tanks because of giver view of Tuvalu's environment weakness. This is deterring, especially given that environment projections recommend that individuals can probably still occupy Tuvalu for the following couple of many years and that foundation speculations are only sometimes made to keep going for over 20 years.

The mixed reactions from people in Tuvalu regarding the Digital Nation project reflect the complex emotions and concerns surrounding the nation's existential threat from climate

change and the proposed solution of embracing digital technology.

¹¹ Lucy Craymer , Tuvalu turns to the metaverse as rising seas threaten existence, Reuters, 2022



For many Tuvaluans, their homeland holds deep cultural and emotional significance, and the prospect of leaving is met with resistance and sadness. The sentiment expressed by some older Tuvaluans about preferring to die in their homeland than relocate highlights the profound attachment that many feel towards Tuvalu and their desire to remain connected to their ancestral land.

On the other hand, the Digital Nation project represents an innovative approach to addressing the challenges posed by climate change and preserving Tuvalu's cultural heritage in the face of environmental threats. However, there are understandable reservations and concerns about the implications and feasibility of such a project.

Some Tuvaluans may view the Digital Nation project as an acknowledgment of defeat or resignation to the inevitability of Tuvalu's disappearance, which conflicts with their faith and hope for the future. There may also be concerns about the potential impacts of digitalization on Tuvalu's traditional way of life, social cohesion, and cultural identity.¹²

Certainly, Tuvalu's unique position in the face of the climate crisis offers both challenges and opportunities for the Digital Nation project. As the world continues to focus on climate change and its impacts on vulnerable nations like Tuvalu, the government has a platform to leverage international attention and support for initiatives aimed at ensuring the nation's resilience and sustainability.

The Digital Nation project, with its focus on preserving Tuvalu's cultural heritage and exploring innovative solutions to the challenges posed by climate change, has the potential to garner interest and support from donors and partners around the world. By engaging in citizen consultations and involving local communities in the project's development and implementation, the government can ensure that the Digital Nation project reflects the aspirations and needs of Tuvaluans while also demonstrating transparency and accountability to potential donors.

Furthermore, the project provides an opportunity to instill hope and optimism among Tuvaluans about their collective future in Tuvalu. By showcasing the potential of digital technology to empower communities, preserve culture, and address environmental challenges, the Digital Nation project can inspire confidence and resilience in the face of

adversity.

¹² Lachlan Colquhoun (2023) Disappearing Tuvalu: Can Metaverse Save It?
<https://www.cdotrends.com/story/18109/disappearing-tuvalu-can-metaverse-save-it>



However, it's essential for the government to navigate this delicate position with sensitivity and inclusivity. Ensuring meaningful participation and consultation with local communities, addressing concerns and reservations, and prioritizing the well-being and interests of Tuvaluans will be critical for building trust and support for the Digital Nation project.

By seizing the opportunities presented by its unique position on the global stage, Tuvalu's government can leverage the Digital Nation project to not only secure international support but also foster hope and empowerment among its citizens for a sustainable and resilient future in Tuvalu..

CONCLUSION

Regulatory oversight of virtual platforms and services is necessary to maintain market integrity and protect against abuse. Balancing innovation with regulatory compliance requires careful consideration of the unique risks and challenges posed by the Metaverse.

Questions arose regarding the ownership and transferability of virtual assets within the metaverse. Legal frameworks needed to adapt to recognize and enforce property rights in virtual environments. Issues concerning copyright, trademark, and other intellectual property rights within the metaverse needed clarification. This included the use of real-world brands, characters, and content within virtual spaces. The collection, use, and protection of user data within the metaverse raised concerns over privacy and data security. Regulations were needed to address these issues, ensuring users' rights were protected. As virtual economies within the metaverse grew, questions arose about taxation, including transactions involving virtual assets, virtual businesses, and virtual currency exchanges.

Instances of virtual crime, such as fraud, theft, and harassment, highlighted the need for clear jurisdictional boundaries and legal mechanisms to address offenses that occur within virtual spaces. The decentralized nature of many virtual environments presented challenges for traditional regulatory frameworks. New models of governance and regulation were needed to ensure the safety, security, and fairness of virtual communities.

Legal requirements for accessibility and inclusion in virtual spaces needed to be developed to ensure equal access for users with disabilities and other marginalized groups. As the

metaverse continued to develop, it was expected that legal frameworks would continue to evolve to address these and other emerging issues. It's essential for lawmakers, technologists, and stakeholders to collaborate in shaping these legalities to ensure the metaverse is a safe, fair, and inclusive environment for all participants.

