APPENDIX I

Name initiative	Type of environmental sustainability or conservation focus	Service or product it offers	What does it want to achieve?	Blockchain use
Adaptation Ledger	Global climate change adaptation	It offers a platform for (BC) applications and to mobilize finance. Next to its 'core enterprise', it also offers consulting, research, and advice services.	Platform that aims to "synergize standards, blockchain and a unified metric in an integrated platform for the applied creation of a suite of tools and testbeds to better align adaptation solutions and mobilize adaptation finance." (Adaptation Ledger, 2020).	Blockchain provides a better accounting system; for transparency, trust; smart contracts; disintermediation.
Carbonfuture	Global climate change mitigation	Carbon offsetting services by providing carbon sink services and carbon sink market services (Carbonfuture 2020).	They want to reverse the flow of greenhouse gasses, through "empowering people and organisations to mitigate the climate crisis by removing CO_2 from the atmosphere" (Ibid.).	It uses blockchain to immutably store data about carbon storage in environmental sinks
Cecil Alliance	Animal welfare (including wildlife)	Application that enables the creation of digital identities for animals. It enables to collect, track, and transact animal data on the blockchain, using IoT and other technologies.	Its goal is to advance the welfare of animals (including wildlife) and species conservation (Cecil Alliance n.d.). By giving wildlife digital identities, wildlife could raise funds for its protection and other welfare-enhancing services.	For data collection, data tracking, data transacting (creating digital identities for animals); transparency, data accessibility, traceability, verifiability (Ibid.).
Decentralized Autonomous Organization (DAO) Integral	Global climate change mitigation	It offers a decentralized market environment "designed for societal cost markets and mitigation instruments, including carbon markets and	DAO IPCI is a public and programmable blockchain-based independent ecosystem, "designed to minimize transaction costs and to make the issuance and transfer	decentralization; smart contracts; accessibility and transparency of data; trading of assets; lowering transaction costs.

		instruments, carbon compliance units, carbon emission allowances, offset credits, renewable energy credits, other environmental credits, and financial instruments, environmental assets, rights and liabilities in general." (DAO IPCI 2018: 3).	of mitigation units (…) highly reliable, transparent and protected from manipulation of centralized power" (Ibid.).	
Platform for Climate Initiatives (IPCI)				
Earth Ledger	'The environment' and 'the planet'	It offers a decentralized, autonomous) platform/log in order to bring together environmental challenges, solutions, and investors. It functions as a "sustainability network" to connect and collaborate (Earth Ledger 2020).	It aims to "resolve the 17 SDG's whilst making them profitable" (Ibid.). It wants to do so by bringing together challenges, investors, contributors, products or services, and solutions. It aims to incentivize users, "to work together towards the restoration of our Planet" (Ibid.)	Blockchain is used to "form trust in a new ecosystem" (Ibid.); transparency; smart contracts; for decentralization; consensus driven decision making; verification of information.
Ekofolio	Forests	Portfolio management of forests as investments. They sell tokens. These represent 'forest assets' and services offered by Ekofolio.	Its vision is "to facilitate the growth of forests [as a "US$100+B investment market"] towards a trillion-dollar, dynamic, transparent and liquid global market for natural capital assets" (Ekofolio n.d.), and 'help to save the planet' (Ekofolio 2020).	Transparency; reducing transaction costs; enabling "fractionalization" of forests by tokenizing them. This enables investment in small bits instead of whole forests.
Fauna Chain Project	Wildlife conservation	They want to enable derivative commodity trading by tokenizing animals.	It aims to collect data and information about existing wildlife and use it to tokenize wildlife (i.e., making a digital representation). These tokens are supposed to enable derivative commodity trading (Faun Chain Project 2019).	Immutable data storage; tokenization of wildlife.
Fishcoin.io	Sustainable fisheries	It offers a database for and incentivization structure to share data.	It aims to incentivize supply chain stakeholders to share data "from the point of harvest to the point of consumption" by putting it into	Immutable data sharing; traceability; tokenization.

			the blockchain database (Fishcoin 2020).	
ForestCoin[.com]	Forest preservation	They sell acres of forest land (in the form of tokens[?]) to be protected by themselves, Cannabidiol (CBD) isolate, "Forever Young" CBD cream, Kiri Trees to be planted by themselves, Hemp oil and Hemp clothing (ForestCoin[.com], 2020c)	They want to raise funds to protect forests (ForestCoin[.com] 2020b) so that water systems can be cleaned [?] in order to prevent their government from 'infiltrating pineal glands with chlorine and fluoride' and other 'nefarious agents' such as 'mercury from vaccines and chemtrails' (Ibid. 2020a.)	cryptocurrency/tokenization[?]

[it remains a little bit unclear how they are using blockchain] |
| Forestcoin[.earth] | Planting trees / Reforestation | Application that is created to incentivize people to plant trees. It offers users a system to be rewarded through, and which also functions as means to verify other users planting activities. | ForestCoin is a cryptocurrency that aims to "[monetize] the planting of trees" (Forestcoin[.earth] 2020). Users receive ForestCoins for planting or verifying trees. It is supposed to be(come) a medium of exchange – consumers can use it to purchase goods or services with and businesses can accept it as medium of exchange. | It uses blockchain to create a cryptocurrency |
| ForestCoin[.space] | Reforestation and forest protection | Offers an investment opportunity in conservation and forest and natural resources management. It does so via an incentive-based fundraising scheme and blockchain 'crowd planting' application. | It aims to raise funds for investment in forest conservation and reforestation. It does so in order to create a 'self-reliant economy' (Forest Coin[.space] 2020). Holders of the 'ForestCoin' have access to the facilities in the conserved forest (Forest Coin[.space]. Alongside the project there is a 'crowd planting app' where people can earn ForestCoins by planting trees anywhere in the world | To create a cryptocurrency that reflects value of natural resources; transparency.

It notes that "ForestCoin's project, have adopted Blockchain to represent the rights of creating guidelines and management policies for forest park and degraded forest area in conservation perspective." (Forestcoin[.space], n.d.). → It is a little bit unclear what they mean exactly, or why blockchain specifically is used for it. |

GainForest	Forest protection	As a platform it offers automated monitoring of forests and enables auditable and decentralized payments by using smart contracts. To forest communities it offers funding.	"GainForest's mission is to catalyse impactful community-based nature conservation by incentivizing friction-free sustainable financing through trust-enhancing technology." (Dao 2020: 7). In other words, it is a fundraising initiative using blockchain and involves local forest communities in preserving nature.	smart contracts; transparency; auditability; decentralization; automatization; disintermediation (creating 'trustlessness' system)
Global Mangrove Trust	Reforestation	Providing donors with a blockchain platform to fund 'blue carbon' mangrove forestry; to community's they provide support for mangrove forestry.	Supporting community-based mangrove forestry.	It uses blockchain technology to foster transparency and efficiency, and to minimize overheads (Global Mangrove Trust 2020; n.d.).
Land Life Company	Reforestation	'Smart reforestation' services	'Smart reforestation' of the 2 billion hectare of degraded lands worldwide with the help of technology (among others: GPS, remote monitoring, automated planting systems, sensing technologies, AI and machine learning) (Land Life Company n.d.a,b,c,d).	data verification; data tracking. [might be other reasons but they don't specify this on their website].
Nori	Global climate change mitigation	Digital marketplace that connects farmers that store carbon in their soils and businesses that want to compensate for their emissions.	"[We are] on a mission to reverse climate change. Our goal is clear - create a new way for anyone in the world to pay to remove excess carbon dioxide from the atmosphere." (Nori 2021).	token issuance; transparency; as an immutable database for quantified and verified offsetting data; to prevent double counting, to lower transaction and verification costs and to remove middlemen (Nori 2020a,b).

OpenSC (by WWF and BCG Digital Ventures)	"(Humanity and) the planet" (OpenSC n.d.)	It offers a tool for supply chain transparency	It aims to "drive increased [environmentally and socially sustainable] (…) production and consumption through supply chain traceability and transparency technology." (OpenSC n.d.). They offer their service to industries and consumers interested in sustainable production and consumption (OpenSC n.d.c).	Traceability; transparency; verification of information
Plastic Bank	Oceans	As a social enterprise, it offers benefits for plastic collectors. It recycles and then sells the plastic.	It aims to prevent plastic pollution in oceans by incentivizing coastal communities to collect it. (Plastic Bank 2020).	smart contracts; secure and transparent transactions; avoidance of fraud or corruption (Plastic Bank 2021).
Poseidon	Global climate change mitigation	Carbon offsetting services through greenhouse gas reducing projects (Poseidon 2020).	They want to "[quantify] the environment and social causes of climate change and [support] projects that reduce greenhouse gas emissions and provide critical support to the communities who look after the most delicate ecosystems on our planet." (Ibid.).	To address and store data about environmental costs of every transaction in details.
Reforestum	Reforestation	Carbon offsetting services through reforestation (Reforestum n.d.b.).	Their "mission is connecting and empowering citizens and organizations under the common goal of reversing climate change by collaboratively protecting and restoring the earth's forest ecosystems for a safer, healthier and fairer future for ourselves and the generations to come." (Reforestum n.d.a).	To avoid double selling; transparency how funds are distributed.
Regen	Ecosystems	Platform that "allows lands	It aims to "realign the agricultural	Data verification; smart

Network	(land, ocean, watershed) (Regen Network n.d.).	stewards to sell their ecosystem services directly to buyers around the world" (Regen Network 2020). It runs applications such as carbon credits, supply chain transparency, reforestation monitoring and 'investment vehicles' (Ibid.: n.d.).	economy with ecological health by creating the global marketplace for planetary stewardship." (Regen Network 2020).	contracts; issuing of Ecosystem Service Credits; transparency; verifying and tracking data; accountability; decentralization (Regen Network 2020).
TreeCoin	Reforestation	They offer to invest in their eucalyptus plantation with financial returns from timber	By planting eucalyptus trees, TreeCoin aims to protect the rainforest from being cut and creating monetary returns for investors (TreeCoin n.d.).	Tokenization; transparency.
TreeWallet	Reforestation	Offering carbon offsetting services through a blockchain based 'wallet' (application)	It aims to reforest degraded lands by incentivizing farmers and communities to plant trees. The reforestation is paid by businesses who want to offset carbon emissions (TreeWallet n.d.).	transparency; accountability; verification; smart contracts.
Veridium	Global climate change mitigation	Digital marketplace for buying carbon credits to offset carbon footprint	It aims to be a carbon-credit and 'natural capital' marketplace, turning "high-quality carbon credits into easily exchanged assets", "[enabling] liquidity through a crypto-asset marketplace" (Veridium 2020a) and automating calculation and offsetting of environmental impacts for businesses (Veridium 2020b).	transparency; to turn carbon credits into easily exchangeable assets; enabling liquidity (Veridium 202a).
Wildcards	Wildlife conservation	Users can pay to collect non-fungible-tokens (NFT's) tokens that represent wildlife.	It aims to raise funds for wildlife conservation by tokenizing of wildlife, making them digitally collectable. It connects conservation organizations to users' donations.	tokenization: transparency of where funds are going.

			(Wildcards n.d.).	
Wildchain	Wildlife conservation	A game. Users pay to adopt digital-representation of wildlife, to plant trees and support real-world conservation efforts.	It aims to raise funds and awareness for wildlife conservation through the gamifying of wildlife. (Wildchain 2020). It aims to enable the user to become a 'digital conservationist', through a blockchain-based mobile game (Ibid.).	Tokenization; NFTs; transparency; efficiency; transactions.
WWF Canada	Watersheds	Application-provider for data collection	Aim is to create a transparent database where volunteers and researchers can enter data on water quality of watersheds in Canada (WWF n.d.)	Transparency; data sharing.
WWF Blockchain Tuna Project (WWF New Zealand, Fiji and Australia)	Wildlife, human rights	Application for supply chain transparency and traceability	Enabling supply chain traceability of tuna fish to stop unregulated, illegal and unregulated fishing and stamp out human rights abuses (modern slavery in fishing sector) (WWF 2018).	Transparency; traceability; data sharing.

Attachment 1: Overview of initiatives, focus, product or service it offers, what it wants to achieve, and use of blockchain

Sources Attachment 1

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