Green List Standard Token (GLS)
FAIR FINANCES FOR EFFECTIVE CONSERVATION

A global green list of fairly and effectively managed protected areas successfully conserving nature

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1. Introduction and vision

The International Union for Conservation of Nature (IUCN) is the world's largest and oldest nature conservation entity. It is a membership-based International Organisation that counts governments and civil society in its ranks, including United Nations agencies, Government Ministries throughout the world, global advocacy groups such as WWF, as well as grassroots organisations for rural communities and indigenous peoples (over 1300 member organisations in over 160 countries). IUCN also counts on 10'000+ Commission members – experts in nature conservation and sustainable development fields such as species and habitat protection, ecosystem management, and environmental governance.

The IUCN Red List of Threatened Species™ and the evaluation of United Nations Educational, Scientific and Cultural Organization's (UNESCO) natural world heritages sites are two successful global programmes of IUCN that

contribute to the long term sustainability and conservation on our planet. Now the IUCN is embarking on a new global flagship initiative: the "IUCN Green List of Protected and Conserved Areas Programme" ("IUCN Green List") hereafter, a certification process that will be blockchain enabled to improve the management performance for conservation success in protected and conserved areas across the globe. At the heart of the programme is the IUCN Green List Standard: a new global performance benchmark for protected areas in the 21st Century.

In line with IUCN's vision of "A just world that values and conserves nature" the aim of the IUCN Green List is to improve the contribution that fair and effectively managed protected areas make to sustainable development through the conservation of nature and provision of associated social, economic, cultural, and spiritual values.

With over 250'000 national parks, nature reserves and other protected areas worldwide – covering over 15% of our planet – only a small proportion are actually performing effectively for successful conservation outcomes. To change this trend, over the next decade, IUCN plans to register and improve over 10'000 national parks and nature reserves through the Green List process and to create a Green List community.

The IUCN Green List is recognized by the United Nations Framework Conventions on both Biodiversity and Climate Change and will be adopted worldwide by government signatories as a voluntary standard contributing to the goals of these Conventions. It offers a standardized way to deliver effective conservation through promoting and rewarding good management and governance performance. Every five years, successfully certified sites will renew their Green List status and the entire process is time-bound, transparent and cost-effective.

Success of the Green List brand and mission will depend on the credibility and cost-effectiveness of the process. Nature reserves and national parks are not generally commercially-enabled and transaction costs can be high to verify processes and outcomes. The costs to do so efficiently can be prohibitive. An innovative solution is to develop and evolve the assurance programme on the blockchain, creating an Ethereum-based Green List Standard Token (GLS) which can then be used to run smart contracts throughout the Green List process. This pilot/prototype initiative leverages the unique properties of blockchain technology, all key certification decision-points and records can be stored on the blockchain in a way that data integrity is maintained and is publicly accessible, tamper-proof and irreversible.

The token sale process (Token Generating Event) will be an IUCN collaboration with the PORINI FOUNDATION, a Swiss non-profit foundation specialized in innovative technologies for the benefit of people and nature. PORINI FOUNDATION will organize the Token Generating Event (TGE) for IUCN and coordinate the work of the project team members. Ether, Neo, Bitcoin and fiat raised during the Token Generating Event (TGE) will be used to build and map the IUCN Green List Standard on the blockchain, and thereby provide support to protected and conserved areas around the globe, from China to Colombia, to participate in the IUCN Green List.

2. Introducing the IUCN Green List

The IUCN Green List Programme aims to recognise and build capacity to increase the number of fair and effective protected and conserved areas globally that deliver long-lasting conservation results for people and nature. The programme consists of the following elements:

- A Theory of Change that outlines how the Green List Programme will help achieve lasting conservation outcomes in protected and conserved areas around the world
- A global Green List Standard for identifying areas that deliver successful nature conservation outcomes and associated cultural, ecosystem services and social benefits
- Rules and procedures explained in a User Manual ([6]) to verify that nominated protected and conserved areas fully meet the Green List Standard
- Outreach, training and communication efforts to promote the Green List Programme and to guide and support area managers or agencies that are committed to achieving the Green List Standard
- A record of Green Listed areas and associated information and data, accessible through the Protected Planet portal of the United Nations World Database of Protected Areas (WDPA)

The IUCN Green List Standard defines four key components that determine a sites success:

1) Good governance
2) Sound design and planning
3) Effective management
4) Successful conservation outcomes

The standard contains a set of criteria and indicators for each of the above items. Participating sites, managers and stakeholders are encouraged to work together to achieve all of the criteria.

Progress is supported and verified through an assurance process, which will be tracked on the blockchain. Once all criteria are independently judged to have been achieved, the area is certified and awarded with "Green List" status. The focus of the IUCN Green List is to develop capacity and enhance performance for protected and conserved areas worldwide. Any site can use the Green List Standard to understand what strategies and activities are needed in order to become and remain successful.

There are three key strands to the IUCN Green List:

- **Community participation**: site managers and stakeholders are encouraged to join the Programme and a growing global network. Experts and practitioners are engaged to provide technical support, comment and advise as mentors
- **Assurance**: independent, transparent and accountable verification of success by "Expert Assessment

Groups – Green List (EAGLs) and third-party Reviewers". The IUCN Green List is designed to adhere closely to the International Social and Environmental Accreditation and Labelling (ISEAL) Alliance code for Sustainability Standards. The focus is on achieving credible assurance and defined impact through the Programme, while guaranteeing that a decision to Green List an area is fair and well deserved based on merit and performance.

- **Cost-effectiveness**: the IUCN Green List aims to provide "added value" to protected and conserved area managers, stakeholders, and their partners (business, government, donors and sponsors). The Programme is committed **to achieving self-financing and to bring new and additional resources to participating protected and conserved areas**.

2.1. Resourcing the IUCN Green List Programme

IUCN has invested significant funds since 2012 to allow for the development of the Standard, the adoption of a robust governance model and a rigorous assurance procedure. During the first phase, the standard was successfully tested and implemented in eight countries: Australia, China, South Korea, Kenya, France, Spain, Italy, and Colombia. These countries are now involved in a scale-up phase, along with new countries including Benin, the Ivory Coast, Malaysia, Vietnam, Japan, Mozambique, Mexico, and Peru. Interest has also been expressed by sites in South Africa, Nepal, Canada, Austria, Switzerland, Georgia, Russia, UAE, Brazil, Ecuador and Chile, among other countries.

IUCN's target is to register over 10'000 sites over the next decade. However, for the ongoing development of the Programme, a more standardized way to participate, measure, meet and fairly distribute costs is required.

2.1.1. IUCN Green List financing mechanisms. IUCN will establish a Green List financing mechanism to cover all the relevant costs associated with the Programme. Additionally, it will channel income and revenue to support the investment costs for eligible protected and conserved areas worldwide. The Green List Business Plan has identified the main costs associated with the IUCN Green List:

- **Core Operations**: such as those costs associated with governance and management of the Programme: web, data and information system management, communications and Programme development, administration and support;
- **Jurisdictional costs**: including the establishment and hosting of Green List "EAGL" teams, engaging and incentivizing EAGL members, deploying independent reviewers, mobilising mentors, arranging site assessments, as well as other communications, outreach and training costs;
- **Site costs**: mobilising staff, coordinating regular dialogues with stakeholders, receiving assessment visits from EAGL representatives and compiling the evidence needed to demonstrate compliance. These costs are generally within the capacities and interests of participating sites, but can accrue and potentially detract from other duties and responsibilities;
- **Training costs**: these include professional training for EAGLs, Reviewers, IUCN and partner organisations' staff, site managers and site staff (e.g. rangers, park scientists, etc.);
- **Participation costs**: all sites around the world should be enabled to participate in the Green List Process which may involve a transfer of resources to poorer countries;
- **Investment costs**: additional costs where sites need to invest in improvements to attain the required Green List criteria

2.2. Green List Standard Tokens (GLS) and blockchain for assurance, credibility and investment

Fair finance for protected and conserved areas can be achieved through a blockchain-based approach for accountability and the resourcing of successful conservation outcomes through the IUCN Green List Sustainability Standard. Creating a Green List Standard Token (GLS) will allow for frictionless value transfer and value accounting for the Green List ecosystem. Strategic partners (nation states, corporations, foundations and agencies) can then support green list sites in a fair, transparent and sustainable manner. Investments become visible by transferring Green List Standard Tokens (GLS) which can then be used to provide and map service-exchange, reward or allocate credentials.

With the goal of introducing crypto-finance and crypto-governance into the Green List process for verifying fair and effective conservation in protected areas, worldwide, the team is working under the following assumptions:

1) Blockchain technology can provide a useful verification for Green List decision-points ("transactions") as part of assurance and credibility principles
2) The generation and release of GLS Tokens will enable an exchange and economy "ecosystem" around these transactions
3) GLS Tokens can help raise revenues and facilitate frictionless transfer between IUCN, in-country expert evaluators and jurisdiction hosts, and protected and conserved areas and their supporters
4) GLS Tokens would be attractive and available to "traditional" IUCN donors and sponsors, as well as an investment vehicle for the crypto-community and other new investors. In this way, the GLS Tokens can help "attract new and additional resources to protected areas and conservation financing" as per the IUCN Green List Business Plan
5) GLS Tokens can provide a useful way for sponsoring Green List transactions on the blockchain, for example, to help establish country partnerships

and/or support one or more favoured protected or conserved areas through the process

6) A Green List fund will be operated to facilitate this, dedicated to manage the GLS Token and its equitable distribution.
7) Over time, the Green List community will use GLS Tokens to pay for discounted access to Green List programmatic services AND as a reward for Green List success

2.3. Blockchain and assurance

Assurance could be strategically linked to blockchain / Ethereum transactions, where each decision is verified and entered onto the blockchain. These decisions include:

- Formation and accreditation of in-country expert assessment groups for the Green List (EAGL)
- Review adaptations of the Standard indicators
- Accepting sites into the different programme phases
- Application, Candidacy, and Listed phase confirmation
- Site visit verifications and review
- Site nomination process assurance
- Site nomination review
- Ensure "Alerts and Triggers" are reviewed and acted upon
- Monitor the relisting process
- Review and confirm relisting decisions
- Additional services and advice.

Each decision point (transaction) above could feasibly be verified on the blockchain and linked to GLS Token investment.

3. Why a blockchain-based solution?

Blockchain is an innovative new technology that can help IUCN to achieve credibility in the assurance process for the IUCN Green List. A public blockchain like Ethereum grants access to all transactions that have ever taken place on the blockchain, ensuring absolute transparency with regards to all smart contracts executed and processes mapped. Smart contracts lay out the conditions that all parties using the contract agree to and the actions described in the contract that can be executed if the required conditions are met.

Community-based blockchain funding processes with TGE (Token Generating Events) will allow our team to overcome a bootstrapping phase. With a TGE approach, the blockchain community and donors can help resolve the "pioneer gap" that can hinder the development of innovation. By transferring key steps for the IUCN Green List process to the blockchain, all stakeholders, including the general public, can see the status of any listed site. Furthermore, a strategic partner or donor would be able to see how his buy-in is used and what results he/she can expect.

3.1. Trust

Public, open consensus-based ledger systems solve many problems that cross-national global organisations encounter. The fact that the blockchain-based approach guarantees execution and deadlines of contracts as well as the low-cost, means that cross-national transfer of value that remains stable and cannot be tampered with. Such process mapping properties can be robustly delivered using blockchain technology.

3.2. Transparency

Full transparency of processes and contracts that are accessible to all stakeholders is central to the Green List Process, and part of the ISEAL Alliance (International Social and Environmental Accreditation and Labelling Alliance) code of practice for Sustainability Standards. These properties can be delivered by a blockchain-based system where data integrity is guaranteed independent of governmental influence.

3.3. Global transnational transfer of value

Unlike national state fiat currencies, the blockchain allows for fast, frictionless, near zero cost, global transfer of value.

3.4. Low transaction costs

Choosing a blockchain like Ethereum ensures scalability and that transaction costs will be significantly lower compared to legacy centralized systems offered by trusted third party payment providers.

3.5. Consensus process

The blockchain's decentralized consensus process guarantees the integrity of the smart contract deployed to the blockchain. It guarantees that the smart contract will be executed free of corruption, censoring, tampering and fraud.

3.6. Signatures and document verification

The blockchain offers great tools to sign and verify documents throughout the IUCN Green List process. The classical blockchain use-case of document signing is a real-world fit for the IUCN Green List and will enable decentralisation of a core listing process.

3.7. Standardisation

Smart contracts are well defined, immutable and give a consistent interface for reporting, accounting and planning. These properties are provided by blockchain technology and enable a simple, streamlined, inherently trustworthy GLS economy to exist. The GLS may not be possible otherwise,

or would be prohibitively expensive to do using traditional centralized hierarchical structures and all the global organisational overhead that goes with it. The availability of a distributed blockchain on which smart contracts can be executed enables the GLS and opens up a wealth of opportunities.

3.8. Payment Rights

One of the key features of the GLS Token is payment for the platform and its services. To pay for any services on the platform, participants must own or be allocated GLS tokens to be able to access the GLS smart contracts. Because the token release schedule is defined over a period of ten years, participants will know exactly what to expect in terms of liquidity in the market.

3.9. Access Rights

GLS are needed to access the network and pay for transaction fees. In addition to using the token to pay for services, it can be publicly traded between participants enabling others to access the platform. GLS is not the only means of payment and other currencies can be used, however small amounts are required to use the platform.

4. Opportunities and Risks with Blockchain

The advantage of a token-based network lies in the removal of friction within the defined Green List Process allowing network participants to work cooperatively together towards a common goal. This will enable the growth of the network and the worldwide adoption of the Green List Process.

4.1. Opportunities

IUCN, as a global institution convening a range of stakeholders through its diverse membership has to map ideas, values and standards for an increasingly decentralized future. The combination of blockchain technology with IUCN global sustainability standards will offer synergetic effects and will provide a conservation blueprint that is equitable, sustainable and allows for the effective management of protected and conserved areas for successful conservation outcomes. Mapping the Green List process to the blockchain will create the following opportunities:

- The Token Generating Event will provide the funding required to establish the IUCN Green List Standard and Green List brand in two very diverse yet complementary communities (IUCN and Blockchain)
- Create new and dedicated financing to provide fair access to the IUCN Green List Programme, as well as to create and establish a new channel for investment
- Extend interest and support IUCN Green List to a new set of participants. Allow for their direct participation so as to improve sustainability outcomes and allow the creation of a new token, the value of which is directly linked to the protection and conservation of nature
- Significantly reduce budgeting and accounting insecurities for all partners involved with less dependence on high friction local currencies
- Important reduction in costs for value transfer. Increase global transparency while allowing the auditing and tracing of all investments
- Become a global standard for value accounting on blockchain
- Balance entry costs for economically challenged and resource-poor country environments through a Partnership Programme
- Lower the entry threshold for access to the Green List Process

4.2. Risks

Ethereum is a promising blockchain technology but is still new and evolving. It is not known, how fast they will develop and how disruptive its effects will be. The following lists some risks associated with this technology:

- The legal framework is not very well defined and there may still be legal obstacles in certain countries which could delay the implementation of blockchain technology
- Switching over to a new technology will take time and effort in terms of teaching and coaching stakeholders
- There may be unforeseen problems in the technology ahead. For example, the User Interface and User experience and the general usability will be crucial for adoption within IUCN
- Depending on the global success of Ethereum, transaction costs could end up higher than expected. The Value of Ether or Bitcoin could rise or fall very quickly and holding a large amount over time could be challenging
- A newer, more advanced blockchain could become available in future. Should this situation arise, the Green List Areas will consider changing to the newer blockchain. If no trans blockchain transfer of tokens is available, token holders will receive a percentage share of the new tokens based on an equivalent representation on the new blockchain.

5. Mapping the certification Process

Mapping the IUCN Green List programme on the blockchain will contribute to fostering a global Green List community that works to scale-up the IUCN Green List globally.

Starting in 2012, the IUCN Green List Standard has been continually tested and revised and an IUCN Green List User Manual and associated cloud-based information management system was developed.

The User Manual ([6]) describes the rules and procedures that parties involved in the Green List Programme have to follow. It outlines who does what, when and how in the Green List process. IUCN drew on the support of Accreditation Services International (ASI), a specialized accreditation body, in developing the User Manual and the information management system. Transferring elements of the certification system to the blockchain will reduce costs and generate new transparent funds for the IUCN Green List community.

5.1. Simplified workflow for the IUCN Green List Standard

To apply for the Green List, each site must complete an evaluation process made up of three stages:

- Application Phase, where the protected areas show that they have the basic ingredients to comply with the Green List Standard requirements, over time. This means that they need to demonstrate good governance, sound design and planning, and effective management.
- Candidate Phase, where protected areas provide evidence that they achieve strong conservation outcomes and meet all of the Green List Standard requirements. Their evidence is reviewed and is evaluated by a group of independent experts and the evaluation process is verified by a third-party reviewer.
- Green List Phase, where a protected areas must pass a mid-term review and a renewal review every 5 years to maintain its certified Green List status.

By establishing clear rules, requirements and responsibilities for all phases of the Green List process and all parties involved, the User Manual ensures consistent high quality assessments of protected and conserved areas against the Green List Standard.

Independent verification that the evaluation process included all necessary steps and relied on sound evidence and stakeholder involvement is provided by Reviewers. These are auditing professional that are contracted, trained and monitored by ASI and important guarantors for establishing the Green List as a credible tool. The User Manual ([6]) would be regularly updated to include and assure blockchain technology and use of GLS tokens.

Each phase is embedded in the Standard Process as shown in Figure 1.

IUCN and ASI follow best practices for inclusive, credible and effective standard-setting and implementation processes as defined by ISEAL. The ISEAL Alliance represents the leading movement of credible and innovative sustainability standards systems such as Forest Stewardship Council (FSC), Marine Stewardship Council (MSC), and the Roundtable on Sustainable Palm Oil (RSPO). ISEAL's mission is to strengthen sustainability standards for the benefit of people and the environment and is considered the global leader in defining and building capacity for good practice.

The IUCN Green List Standard is set to fully comply with ISEAL requirements by 2019.

5.2. Pilot phase during 2018 and 2019

During 2018 and 2019, the IUCN Green List Standard will be implemented and tested in a range of "enabled" developed countries as well as non-OECD countries with more "challenged" frameworks for resourcing conservation.

Trialling of a GLS-based system is proposed in Mexico, Dubai and the UAE, China, Japan, Switzerland, Ukraine, Seychelles, Mozambique, Vietnam, Papua New Guinea and Colombia, or other interested countries.

Those "enabled" countries will purchase Green List Standard Tokens (GLS) and use these to secure IUCN Green List services, principally assurance and EAGL evaluation team costs and "smart contract" transactions and decisions. Those "challenge" countries are allocated GLS and use these as above. Successful Green List sites in this phase are rewarded with a full return of their GLS investment, which they can use for more services for ongoing evaluation, capacity-development and further review; or donate them back to the IUCN for use in another country (e.g. mentorship between PAs in different countries); or use them to finance specific conservation activities and programmes.

5.3. Green List Partnership Programme

During the pilot phase, IUCN will seek to "match" and mentor participants with aspiring candidates. The Partnership Programme will evolve based on the feedback received during the Pilot phase. The Partnership Programme should provide fair access to the IUCN Green List Programme, as well as the ability to channel finances to those sites that are committed to improve, but lacking in resource capacity. This provides an incentive and an ongoing "membership" in the Green List network while creating a sense of community.

6. Token Launch

To map the IUCN Green List Process, IUCN and the PORINI FOUNDATION will develop a smart contract platform -based on the Ethereum blockchain. To access this platform ecosystem participants will be required to hold (owned or allocated) GLS tokens. Some of these tokens will be acquired through the Token Generating Event (TGE) which is split into three phases. The target group of **Phase 1** is the community that is already familiar with cryptocurrencies. This sale period will start in November 2017 and lasts only for four days where the first buyers will get the best value. **Phase 2** is targeted at classical donors and supporters of

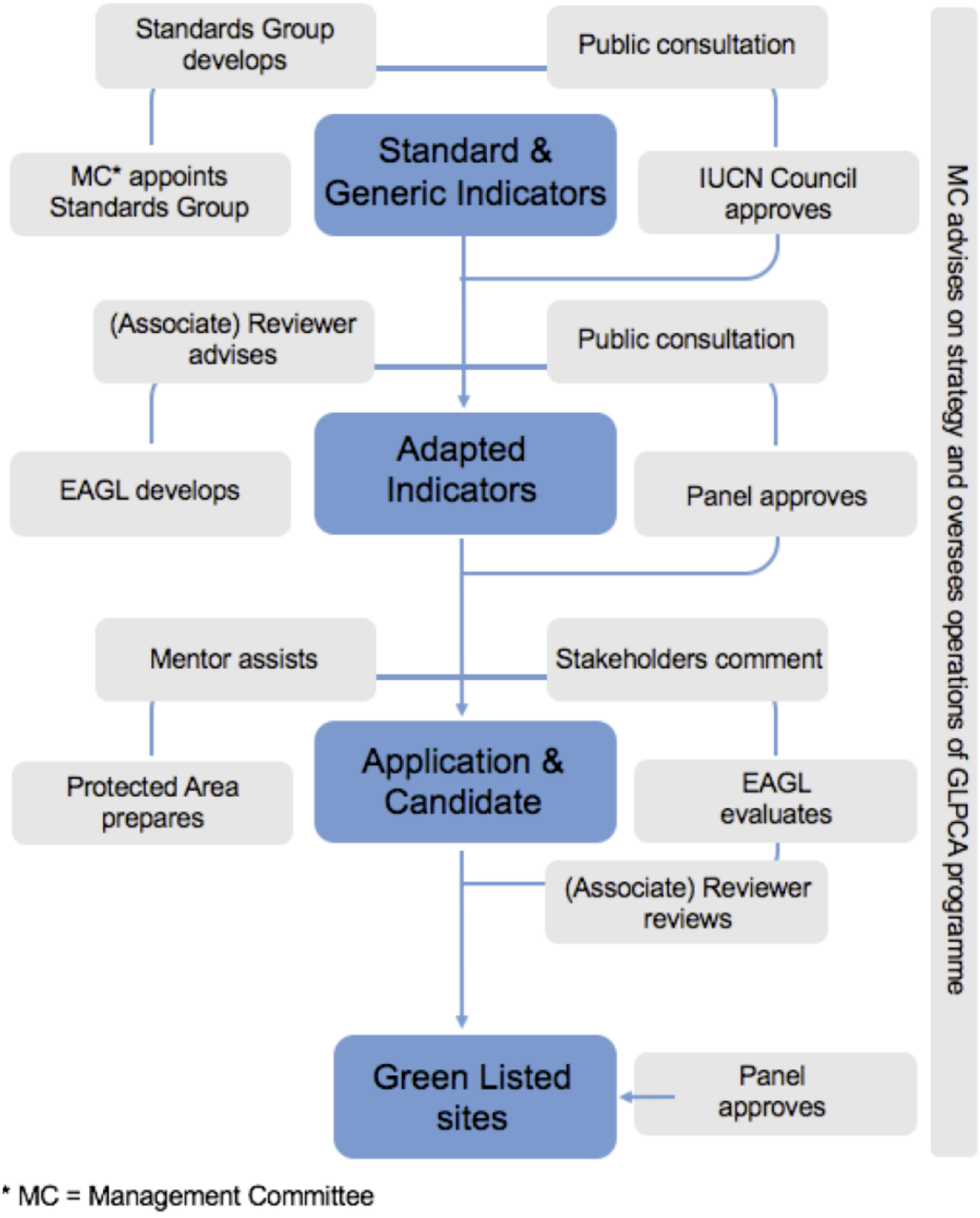

Figure 1. Simplified Process to achieving and maintaining IUCN Green List status

conservation efforts. This sale will run for a longer period, giving donors the necessary time to adapt to blockchain concepts and services. The sale will run from the 1st of December 2017 to the 31st of January 2018 giving the largest buyers the best value. **Phase 3** will be implemented after the pilot phase. In phase 3 the IUCN releases a maximum of 10% of all available tokens (approximately 1'000 sites) out of the Green List fund to stakeholders and the market every year. Depending on feedback from the pilot phase, the final details of phase 3 will be defined.

The funds raised in phases 1 and 2 will be exclusively used to:

- create the Smart Contract Platform and define the ecosystem of the GLS token
- Finance the Green List Process up to phase 3

Tokens embody the right of membership to the Green List ecosystem. These tokens serve as a license to use the smart contracts and perform operations on the platform and will help create a Green List community. The immediate focus is on developing the platform so as to maximize the allocation of resources to sites in the IUCN Green List programme.

The PORINI Foundation will follow the evolution of value exchange between tokens and fiat and publish the analysis regularly on the dedicated IUCN GLS Token website.

In the case of there being a more suitable long-term sustainable blockchain or a protocol or a process that allows sharing value across blockchains for the IUCN Green List Process, IUCN and PORINI reserve the right to switch blockchains or adopt these processes or protocols. The token value of the tokenholder will be mapped and transferred accordingly.

6.1. TGE –ICO Details

6.1.1. Phase 1: Discount token sale. Figure 3 shows the token sale schedule which takes place in November 2017 over a period of four days. On day one, the token sale goes live and participants receive a 30% discount on their purchase. By day two, the discount reduces to 20% and by day three, the discount is 10%. On the final day of the token sale, tokens are sold with 0% discount.

Platform	Ethereum		
Token supply	100 Mio Tokens		
Decimals	6		
Phases	Phase 1	Phase 2	Phase 3
Token launch dates:	Nov 17	Dec 17- Jan 18	Jan 20
Currencies accepted	Ether (ETH)	ETH, NEO, fiat, BTC	tbd
Tokens available	20 Mio	20 Mio	10 Mio p.a.
Minimal contribution	1	open	open
Maximal contribution	10'000 ETH	open	open
Minimal buy in in	10 ETH	open	open
Unsold tokens	go to phase 2	go to IUCN	market
Tokenprice	250 GLS/ETH	250 GLS/ETH	market
	0 – 30% discount	0- 30% bonus	
Tokendistribution date	1 Feb 18	1 Feb 18	

Figure 2. ICO definition details

Phase 1 - discount token sale	Available GLS tokens
30% discount phase - 1 day	5,000,000
20% discount phase - 1 day	5,000,000
10% discount phase - 1 day	5,000,000
0% discount phase - 1 day	5,000,000

Figure 3. Token sale – phase 1

Phase 2 - bonus token sale	% bonus
up to 10,000 GLS purchased	0%
10,000 to 50,000 GLS purchased	10%
50,000 to 100,000 GLS purchased	20%
more than 100,000 GLS purchased	30%

Figure 4. Token sale – phase 2

Phase 3 - starting 2020
Tokens are sold out of the Green List fund to meet the demand of the sites with a maximum of 10% (1000 sites) of all available tokens sold by IUCN per annum

Figure 5. Token sale – phase 3

6.1.2. Phase 2: Bonus token sale. After the first round, classical donors and supporters with a significant global track-record of conservation efforts will be given the opportunity to buy tokens with a Bonus. Phase 2 of the token sale starts on December 1st 2017 and ends on 31st January 2018. Stakeholders who buy more than 100'000 GLS will receive a 30% bonus on tokens purchased. For those buying up to 50'000 GLS, the bonus tokens received will be an additional 20% on their purchase. Those buying more than 10'000 GLS at once receive a 10% bonus on their purchase. Details in 4.

6.2. Distribution

Tokens are distributed as in Figure 6.

7. Roadmap

The roll-out of the IUCN Green list will adhere to an aggressive time schedule as shown in figure Figure 7. Registration for the token sale commences on 23rd October 2017 with the first public token sale period (phase 1) opening on 1st November 2017. On Friday 1st December 2017, the stage 2 token sale period opens. All tokens sold in TGE phase 1 & 2 will be released on the 1th of February 2018. February 1st 2018 marks the commencement of stage 3. From June 30th 2018 (stage 4) the first pilot projects will start to be mapped to the blockchain. Full roll-out of the implementation and deployment plan will commence on December 31st 2018 (stage 5) and the first set of protected areas from the pilot phase go online towards the end of 2019 (stage 6). Starting in 2020, the GLS economy will be fully

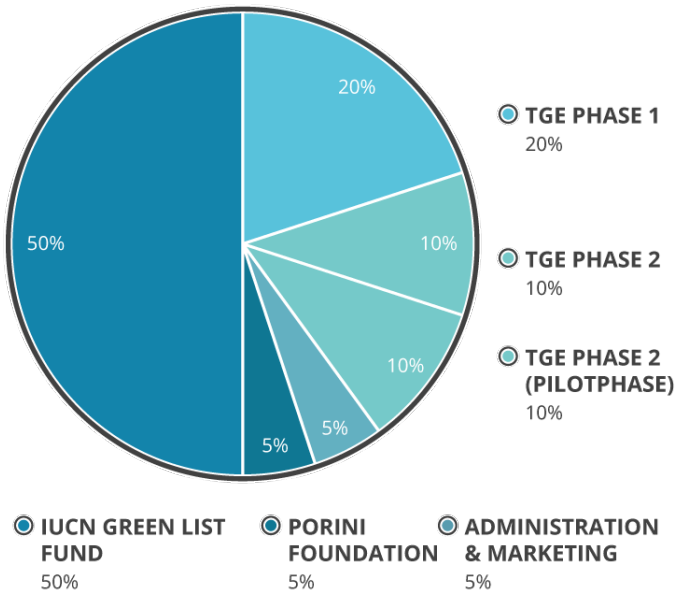

Figure 6. IUCN Green List token distribution

seeded for future growth, running at an estimated 3'000 sites through the Green List Process until 2025; with 10'000 sites by 2030.

8. Leadership team

The PORINI FOUNDATION will coordinate the work of all team members, where every member enriches the team's quality with his/her specific competences like profound knowledge of the Green List Process, blockchain technology, Green List implementation in the regions or on certification and legal issues in a changing world. Additional competences can be integrated as needed through an advisory board supporting the team and the mapping process.

Roman Eyholzer
IUCN Green List Programme
Roman worked mainly in Europe with different engagements in Ecuador and East Africa. He successfully ran projects in population management, sustainable hunting, protection of endangered species and protected area management. He was leading wildlife manager for the canton of Fribourg in Switzerland with 16 game wardens as his "long arm" in the field. Roman is also CEO of the PORINI Foundation.

Figure 7. IUCN Green List road map

Toni Caradonna
CTO Porini Foundation
Smart Contracts, Multipaess, Innovation-Management. Implementing Green List Standard on the blockchain. Based in Switzerland, Toni has many years of experience in delivering complex software projects.

Patrick Salm
Co-Founder SmartOne – Legal solutions for the crypto community;Co-Founder and CEO Kepler Technologies LLC
Patrick is a blockchain entrepreneur and thought leader. He is part of the SmartOne foundation council: a project which aims to bring the disruptive capabilities of blockchain-based enterprise to the legal sector by creating a means of access to legal services for the crypto community. Before, he served as an advisor to TaaS, the first closed-end fund dedicated solely to blockchain asset and who co-founded Kepler Technologies, a cryptocurrency portfolio management and analytics platform. Patrick's track record includes more than 10 years' in leading roles, such as Head of Recovery, Business Analyst and Strategic Risk Manager in large, financial institutions. He holds a MSc in Banking and Finance from the Institute of Financial Services Zug at Lucerne University of Applied Sciences and Arts and a BSc in Business Law from the Zurich University of Applied Sciences. He is also among the first tutor group of the CAS in Blockchain at Lucerne School of Information Technology.

Eamonn Hynes
Software engineer and blockchain expert
Eamonn is a software engineer with extensive experience in delivering complex software projects for companies in the UK and Ireland. He has been involved in the Ethereum blockchain community for the last number of years and has contributed to a number of succesful projects, including the founding of a multi-million Euro recruitment company. Eamonn lives in the UK, is a member of the Instition of Engineering and Technology (MIET) and holds a master's degree in Computer Science from Cambridge University.

Sönke Fischer
Strategy Director
Sönke Fischer is responsible for the implementation of ASI strategic initiatives, particularly to develop ASI towards being a data driven organization. He sees integrated data systems, data analytics and sharing of information as the enabling factors in effective and diversified assurance services, which allow for the engagement of all interested parties. In the 7 years with ASI prior to his appointment as Strategy Director, Sönke served as ASI Marine Stewardship Council program manager, Quality Manager and, most recently, Operations Director. He has provided advice and led the development of various kinds of sustainability standards, including the scoping and development of the assurance system for the IUCN Green List of Protected and Conserved Areas. His academic background relates to the impacts of climate variations on fisheries management. For his research, he spent several years in Central and South America. He has also worked as a trainer and environmental educator in a marine protected area.

Sönke holds a PhD in Marine Ecology from the Alfred Wegener Institute for Polar and Marine Research and an MSc in Tropical Aquatic Ecology from the University of Bremen, Germany. Sönke is a German national and speaks English, Spanish, German and Albanian.

James Hardcastle
IUCN Programme Development Manager
James has a diverse background in endangered species and protected areas, community-based nature conservation, and climate change adaptation. James has worked on the ground with protected area issues for conservation agencies in countries in Europe, Asia, Africa, the Pacific and in Australia. He has particular expertise in participatory planning tools and sustainable financing for conservation and is a passionate advocate for island issues. James, a UK and Australian national

speaks fluent English, Spanish, French and Vietnamese.

Nirmal Jivan Shah
Chief Executive, Nature Seychelles
Nirmal is an expert in the environmental and sustainable field. He is always eager to push the current environmental and conservation studies to the next frontier – a man with a mission. Nirmal has done amazing work in raising environmental consciousness in the Seychelles and under his guidance Nature Seychelles has established a sustainable funding mechanism through eco-tourism under the strictest environmental rules. Funds that are vitally important for the many on-going research programmes being conducted in the Seychelles. He has also been central to the development of the Western Indian Ocean Marine Science Association (WIOMSA), which has helped generations of marine scientists to improve their work through research grants, training and publications. His leadership and action orientated approach inspire others to follow in his footsteps.

Sandra Valenzuela de Narvaez
Planning & Development Director
WWF Colombia
Sandra is Deputy Director and leads strategic and financial planning in WWF Colombia. She coordinates planning, monitoring and evaluation of performance of all programmes and projects carried out by WWF in Colombia ensuring transparent, accountable, efficient and effective management of field offices and providing analysis and information to the management team. Sandra has a long record in conservation and management of protected areas and she is an outstanding professional in this field of work. She is always interested in new strategies to improve efficiency and to find new funding opportunities for her region. The Colombia Office will support the Green List programme and the implementation based of GLS token transfers.

9. Conclusion

We're excited about the possibilities of the IUCN Green List and our new, innovative way of economically incentivising individuals and organisations to preserve nature and participate in and abide by global environmental programmes.

This is a unique opportunity to support both the preservation of the planet's species and ecosystems and a truly innovative applied technology. By supporting this project, participants will have insight into a global state-of-the art transformation process that connects decentralized applications with a unified, new generation global process management tool. This is the first global non-profit organization that embraces blockchain technology in Business Process Mapping. The global IUCN Green List of Protected and Conserved areas is the perfect use-case for a blockchain application in the real world: there is demand for transparency, there are few transactions, the process is predefined and highly credible, and there is a need for globally consistent data and increased trust among participants. The GLS Tokens will directly support positive impacts in the wild places and natural heritage areas of some of the most biodiverse corners of the planet.

The Green List is in the interests of the crypto-community to bring blockchain technology mainstream and demonstrate a high quality application with global impact in the sustainable development domain. By supporting this project and IUCN's efforts to embrace this disruptive technology we will demonstrate how both Ethereum and blockchain technology can create additional sustainability impact relating to defined conservation outcomes, gain acceptance, and the global media attention it deserves.

The Green List blockchain project has all the ingredients for success in securing the long-term sustainable future of the IUCN Green List communitiy and protected and conserved areas around the world. We urge as many people as possible from all over the world to be a part of this opportunity for credible conservation success.

The SHA-256 Hash of the pdf version of this document is stored in the message section of the first transaction in the Porini Foundation's Ethereum Address: 0x0000007658f8c5703c34b874a4b2d7dd2c9d3df0

References

[1] Larissa Auberger and Matthias Kloppmann. Combine business process management and blockchain. *Digital process automation with BPM and blockchain*, 2017. https://www.ibm.com/developerworks/library/mw-1705-auberger-bluemix/1705-auberger.html.

[2] Guillaume Chapron. The environment needs cryptogovernancey. *nature.com - comment*, May 2017. https://www.nature.com/news/the-environment-needs-cryptogovernance-1.22023.

[3] Gideon Greenspan. Avoiding the pointless blockchain project. *Private blockchains*, Nov 2015. https://www.multichain.com/blog/2015/11/avoiding-pointless-blockchain-project/.

[4] Dr Garrick Hileman and Michael Rauchs. Global blockchain benchmarking study. *Cambridge University*, 2017. https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/global-blockchain/.

[5] Bruce Hughes. The benefits of digital business process management with blockchain technology. *Computer Weekly*, Oct 2016. http://www.computerweekly.com/opinion/the-benefits-of-digital-business-process-management-with-blockchain-technology.

[6] IUCN. Iucn green list of protected and conserved areas: User manual. *IUCN and World Commission on Protected Areas (WCPA)*, Gland, Switzerland 2016. https://www.multichain.com/blog/2015/11/avoiding-pointless-blockchain-project/.

[7] Satoshi Nakamoto. Bitcoin: A peer-to-peer electronic cash system. 2008.

[8] Svein Nølnes. Beyond bitcoin enabling smart government using blockchain technology. *International Conference on Electronic Government and the Information Systems Perspective*, Aug 2016.

[9] Stefan Seebacher and Ronny Schüritz. Blockchain technology as an enabler of service systems: A structured literature review. *International Conference on Exploring Services Science*, Apr 2017.

[10] Bettina Warburg. How the blockchain will radically transform the economy. *TED talk*, Jun 2016. https://www.ted.com/talks/bettina_warburg_how_the_blockchain_will_radically_transform_the_economy/transcript%3flanguage%3den.