

DAO IPCI

DECENTRALIZED AUTONOMOUS ORGANIZATION «INTEGRAL PLATFORM FOR CLIMATE INITIATIVES»

blockchain ecosystem for carbon markets, societal costs mitigation instruments, environmental assets, rights and liabilities

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DAO IPCI is a Decentralized Autonomous Organization operating, sustaining and developing the Integral Platform for Climate Initiatives, smart contracts and blockchain technology-based independent ecosystem designed for carbon markets, societal costs mitigation instruments, including carbon compliance units', carbon-offset credits, other environmental mitigation credits, environmental assets, rights and liabilities.

DAO IPCI – truly decentralized public blockchain ecosystem is authentically private nonprofit project independent of government, corporate, business or NGO particular interests.

On May 24, 2016, the Russian Carbon Fund has officially unveiled the Integrated Program for Climate Initiatives.

“The Integrated Program for Climate Initiatives is designed to develop a distributed network of mitigation contributors based on common principles, rules and criteria, as well as provide an accounting platform, which can achieve absolute emission reduction targets in compliance with quantitative emission limitation commitments. The goal of the Integrated Program for Climate Initiatives is to integrate corporate and regional mitigation initiatives.” ([Sustain Europe](#))

The Integrated Program for Climate Initiatives derives from ongoing subnational and corporate climate initiatives and aims at providing for common investment instruments, which are based on climate change mitigation outcomes including high quality carbon offset credits.

The Integrated Program for Climate Initiatives has served as DAO IPCI genesis program.

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Executive Summary

Ronald Coase has proposed most efficient market-based approach to the problem of social costs. This approach has introduced the concept of limited right to perform activities harmful to the third party and provided basis for market-based distribution of limited resource and for a peer-to-peer settlement of reciprocal damage.

Advance of decentralized arbitration, distributed ledger, triple-entry accounting technologies such as blockchain, crucially decreases transaction costs for peer-to-peer interactions and thus provides for further development of Coase paradigm. Application of blockchain technology to mitigation of collateral socio-environmental damage of economic activities relies on a market concept of decentralized peer-to-peer and public evaluation of negative impact, distribution of liability, and settlement by means of mitigation outcomes.

DAO IPCI in the first instance provides for accounting of claims to limited credit-based or quota-based rights to GHG emissions.

DAO IPCI design objective is to provide common space, common space fabric, common tools and ecosystem that would be universal, reliable, easy-to-use, and transparent and allow diverse stakeholders, including businesses and individuals, to register quantified impacts and pledges, to invest mitigation projects, to offset carbon footprint, to acquire and trade mitigation outcomes, to join existing programs or launch new programs.

As societal costs mitigation-focused blockchain ecosystem, DAO IPCI is smart contracts-based digital environment developed to minimize transaction costs, to make issuance and transfer of mitigation units, including internationally transferred mitigation outcomes, highly reliable, transparent and centralized manipulations-proof.

Decentralization is ensured at the key level of different mitigation programs operating in the same digital environment. There are no technical restrictions as to who may launch autonomous mitigation program in DAO IPCI. Existing mandatory, voluntary, large and small programs of diverse scopes of activities, jurisdictions, as well as businesses, NGOs and individuals may create independent DAO core to implement specific programs and projects and perform transactions in DAO IPCI. Independent mitigation programs within DAO IPCI may interlace and form a web of DAOs choosing modules and protocols they wish to share and have in common with their peers.

Mitigation Token, MITO, and MITO Market are designed to serve as an exchange unit and exchange for whatever asset-based instruments different programs operate with. MITO holders may evaluate and assign cost to virtues and flaws of different programs and their instruments (units) by means of Mitigation Token as an exchange currency.

Furthermore, DAO IPCI architectonics provide for actual interaction of different asset-based systems on the Ethereum blockchain. The modules of external blockchain systems, DAOs, e.g. energy assets-based, may be included into DAO IPCI Core, and reflected in the decentralized application, and vice-versa.

Mitigation Token sole purpose is to provide market exchange operations with environmental units issued to the environmental units' registries by independent entities under the rules and supervision of operators, which accept MITO policy.

MITO is inherently appropriate and designed for executing DAO IPCI smart contracts, including placing and executing buying and selling of environmental units' orders, for security deposit contract collateral, MITO market commission fee.

MITO emission implies strict limitation of the potential amount of emission, strict adherence to the interests of the MITO holders, the interests of the issuers of environmental units and participating environmental programs' compliers.

To avoid dilution and preserve the interests of MITO holders, 50% of MITO newly issued, which will be possible at least one year after initial emission, shall be distributed to existing MITO holders.

MITO emission protocol shall ensure direct correlation of current cap for MITO emission and the sum of environmental units secured and accessible via environmental units' registries minus the amount of MITO previously issued. Thus, MITO-to-environmental units' ratio shall be predetermined by the protocol and reach maximum at the stage of ICO, and with growth of environmental units issued further MITO emissions shall be close to 1 with a certain lag in favor of environmental units due to the time needed to agree on and perform further emissions.

Along with global trend toward the increase of value of climate change mitigation outcomes and cost of GHG emissions, this algorithm would support long-term increase of value of Mitigation Token and of DAO IPCI mitigation ecosystem.

Long-term prospects of DAO IPCI development are limited only by its' functional capacity as the trends are evidently in favor of environmental markets' and specifically carbon markets' expansion both in scale and number, linkage and integration with a perspective of ultimate creation of common market space with fungible instruments. DAO IPCI is a prototype of such market environment.

Definitions

“DAO IPCI” is a decentralized autonomous organization “Integral Platform for Climate Initiatives”, an independent smart contracts and blockchain technology-based ecosystem for carbon markets, societal costs mitigation instruments, for environmental market assets, rights and liabilities

“Program” is a market-based climate change, environmental and other societal cost mitigation program operating in DAO IPCI

“Mitigation” – reduction of negative external effects of economic activities, for example, reduction of GHG emissions

“Environmental unit” is a digital unit issued in DAO IPCI representing climate change, environmental mitigation outcome achieved and verified in accordance with the rules and requirements of relevant program

“Operator” is a person authorized by relevant program to supervise compliance with the rules and requirements of the program in DAO IPCI, to initiate emission of the internal token in accordance with MITO policy, to approve environmental registries, security reserve and security deposit contracts, issuance limits for environmental units, their validity period, security reservation and security deposit parameters, and to list independent entities

“Genesis Operator” is the Operator for “The Integrated Program for Climate Initiatives”, which has served as the initial DAO IPCI program (see “The Programs Operating in DAO IPCI”)

“MITO Pool of DAOs” is a pool of operators and participants of decentralized autonomous organizations within DAO IPCI ecosystem, which pursue MITO Policy, share common Mitigation Token-based market and abstain from emission of alternative digital currency

“Issuer” is an original owner of underlying mitigation outcomes, who initiates the procedure to issue environmental units in DAO IPCI by creating particular environmental registries, security reserve or security deposit contracts

“Complier” is an identified user performing in compliance with DAO IPCI rules, and pursuing certain climate, societal costs’ mitigation policy, or program

“Independent Entity” is an independent entity accredited and authorized by the operator to assess and verify mitigation outcomes’, quantified impact, quantified commitments’, with relevant standards, methodologies, program rules and requirements as underlying for the environmental units issued in DAO IPCI, and to support preclusion of double spending

“Internal Token” (Mitigation Token, MITO) is a current digital unit issued by the operators subject to the approval of MITO Pool of DAOs under MITO Policy to reflect transactions, transfer of rights and commitments in DAO IPCI. Mitigation Token sole purpose is to provide market exchange operations with environmental units issued to the environmental units’ registries by the independent entities under the supervision of the operators

“MITO Policy” is a principle agreement of the operators to share common Mitigation Token-based market, to cap emission and abstain from emission of alternative digital currency

“Issuance limit” is a maximum number of digital units set to be issued to the registries

“Smart contract” is a partially or fully self-executing protocol that facilitates, verifies, or enforces the negotiation or performance of a contract.

Introduction

Problem of social costs, the issue of negative externalities accompanying economic activity has been in the focus of economics for at least 100 years. Basic questions, which need answers in order to resolve the issue, are: how to measure negative impact? who is liable? how to settle? Ronald Coase has proposed most efficient market-based approach to the problem of social costs. This approach has introduced the concept of limited right to perform activities harmful to the third party and provided basis for a peer-to-peer settlement of reciprocal damage. Nevertheless, the most common model still implies more or less arbitrary assignment of the answers to these questions by governments.

According to the famous “Coase Theorem”, any allocation of limited resource is equally effective subject to free market trade and zero transaction costs. Its meaning is that transaction costs play crucial role. Zero transaction costs are only a hypothetical case for "spherical resource in a vacuum." In this sense, the government should in the first place take care of maximizing efficiency of institutions, minimizing transaction costs, which at the end of the day means minimization of centralized interventions. At the same time, any allocation of the resource is acceptable, provided it remains limited.

Furthermore, as costs are of subjective nature and are determined through juxtapositioning subjective values, decentralized peer-to-peer approach is necessary for evaluation of negative impact costs and mitigation benefits.

Advance of decentralized arbitration, distributed ledger, triple-entry accounting technologies such as blockchain, crucially decreases transaction costs for peer-to-peer interactions and thus provides for further development of Coase paradigm.

Application of blockchain technology to mitigation of collateral socio-environmental damage of economic activities relies on a concept of decentralized peer-to-peer and public evaluation of negative impact, distribution of liability, and settlement by means of mitigation outcomes.

Most prominent representation of collateral socio-environmental damage of economic activities are global environmental risks, climate change-related threats, which affect life of individuals, their health and well-being, businesses (including physical risks, financial, liability and regulation risks), and natural environment.

The public awareness about such problems and the desire of individuals and businesses to support various projects offsetting environmental damage is high, and the projects and their outcomes are sought to be independently verified quantified commitments-based and result-based.

Climate change mitigation problem is universal and in many respects is most simple case to refer in terms of mitigation of collateral socio-environmental damage of economic activities. The limited resource of the rights to economic activities harmful for the climate is quantifiable, universal and essentially fungible.

Climate change is a global issue with multiple and extremely diverse sets of stakeholders, and may be resolved only on decentralized and public basis. Market instruments to mitigate climate change risks, damages are developing globally and include UNFCCC Paris Agreement concept of ‘internationally transferred mitigation outcomes’. Though all carbon units essentially represent a right to emit one ton of carbon dioxide equivalent (CO₂e), regulatory, legal, commercial and trade, transactional, interjurisdictional border barriers prevent their fungibility, which gravely affects their economic and environmental efficiency. There has been no common space fabric, financial instrument and ecosystem, which would be universal, easy-to-use, transparent and reliable. The ecosystem that would allow diverse stakeholders, governments, civil society, businesses and individuals actually and directly to participate in mitigation activities, to register quantified commitments, invest environmental damage mitigation

projects, to offset carbon footprint, acquire and trade mitigation outcomes. In a way, we may define the UNFCCC Paris Agreement as a 'global climate policy interaction protocol' addressing this issue.

One of the main barriers to the introduction of environmental markets, especially decentralized peer-to-peer schemes is inertia of the existing regulatory mechanisms, "rut" thinking, corporate interests, "the evil you know is better than the evil you don't" concept. "Existing system, with all of its imperfections, was at least understood and capable of being manipulated by learned and skilled industry and regulatory professionals".¹ "Fundamental rationale for emissions trading is that industry does not need to be told how to achieve inexpensive emissions reductions; industry only needs to be given the freedom to develop these reductions in a way that assures positive environmental outcomes".² Many employees of government and corporate environmental agencies might face the need to retrain or even the threat of losing their jobs and their solidarity in opposition to the new model is quite understandable.

The opposition of environmental agencies, OTC brokers, administrators of registries and regulators as a class or corporation is even more evident in relation to blockchain-based market models and concepts. Blockchain solution if it is essentially decentralized and transparent, as it should be, would be as such disruptive for their businesses.

Market-based approach is fundamentally quantity-based or resource-based. Once the resource is limited and quantifiable via recognized methodologies, self-executing algorithms are applicable substituting many of the regulatory functions.

It would seem feasible for the partisans of market (quantity-based) approach toward climate change problem to focus on opportunities derived from the development of "quantified greenhouse gas emission limitation and reduction commitments" model.

According to Intergovernmental Panel on Climate Change, limiting the warming caused by anthropogenic CO₂ emissions alone with a probability of >33%, >50%, and >66% to less than 2°C since the period of 1861–1880, required cumulative CO₂ emissions from all anthropogenic sources to stay between 0 and about 5760 GtCO₂, 0 and about 4440 GtCO₂, and 0 and about 3670 GtCO₂ since that period, respectively. An amount of 1890 [1630 to 2150] GtCO₂, was already emitted by 2011. Therefore, to provide for acceptable level of risk mitigation the volume of future emissions since 2011 should stay within approximately 750 GtCO₂.³ Similar to other scarce natural resources the more we exploit it the more expensive it gets, and the more costs we bear.

Thus, for 2017, conservative evaluation of anthropogenic GHG emissions budget left would be 600 GtCO₂. This is the number chosen to set ultimate cap for emission of Mitigation Tokens in DAO IPCI (see section "Mitigation Token").

Within the time-space dichotomy of the party, which causes the damage, and the party, which suffers the damage, on the space scale, there are countries that are presumed to bear most responsibilities for accumulated damage and countries presumed most vulnerable to the damage. On the time scale, there are forthcoming generations presumed most vulnerable. The global resource of carbon emissions rights is limited and belongs not only to current owners of the sources of emission or those most vulnerable to

¹ Nine Issues and Myths Regarding the Implementation of Emissions Trading By John Palmisano Evolution Markets LLC Washington, DC February 2002 p. 4

http://www.e5.org/downloads/ETBrussel210202/Palmisano_commentsDirectiveProposal.pdf

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http://www.e5.org/downloads/ETBrussel210202/Palmisano_commentsDirectiveProposal.pdf

³ http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_SPM_FINAL.pdf

the damage caused, but to forthcoming generations as well. Moreover, future generations are the party to suffer most damage. Under quantified commitments-based market system property rights should be assigned to the party, which values them most. Therefore, the market design should provide for the interests of forthcoming generations by long-term budgeting of the resource and probably by development of specific long-term market instruments.

Global coverage of quantified commitments-based programs with the launch of South Korea ETS has reached 4.6 MtCO₂ in 2015, and with the launch of nationwide ETS in China might be close to 7 MtCO₂ in the end of 2017, while annual global emissions remained at approximately 32 GtCO₂.

Quantified greenhouse gas emission limitation and reduction commitments and commitments-based long-term budgeting of emissions are fundamental for environmentally sound mitigation policy.

Wide variety of existing forms of climate commitments, contributions makes them difficult to evaluate by universal scale and is a barrier for interaction, linkage of programs and fungibility of instruments (units) that are critical to ensure global mitigation effect.

Only quantified greenhouse gas emission limitation and reduction commitments and quantified commitments-based compliance units are inherently fungible on global scale.

The property rights issue should be resolved to provide for compliance units to become tradable. With the property rights explicitly or implicitly established creation of the market for carbon compliance units, representing rights to emit CO₂, becomes possible. Yet, markets do not arise as natural phenomenon. They can only be created by human efforts, which could emerge either successful or failed.

Theoretically, it would be just natural and logical for the 'peers' to formulate fair method of allocation of limited resource. The starting point, the baseline could be natural rights of ownership of the resource. For emissions markets the principle is known as "grandfathering". It is consistent with liberal economic principle of allocation, one of famous historical examples of the application of which is Homestead Act in 1862 in the United States.

In accordance with such Homestead Principle, the resource is distributed on the grounds of claims, though in limited quantity, and assignment of its share to particular owner is subject to efficient and careful exploitation.

Thus, it is particular business, enterprise, the company itself, which is interested to claim a certain portion of the resource, to claim specified amount of annual greenhouse emission rights, and to justify the claim by efficient exploitation of the resource.

DAO IPCI in the first instance provides for accounting of claims to limited credit-based or quota-based rights to GHG emissions.

Concept design

DAO IPCI design objective is to provide common space, common space fabric, common tools and ecosystem that would be universal, reliable, easy-to-use, and transparent and allow diverse stakeholders, including businesses and individuals, to register quantified impacts and pledges, to invest mitigation projects, to offset carbon footprint, to acquire and trade mitigation outcomes, to join existing programs or launch new programs.

As societal costs mitigation-focused blockchain ecosystem, DAO IPCI is smart contracts-based digital environment developed to minimize transaction costs, to make issuance and transfer of mitigation units, including internationally transferred mitigation outcomes, highly reliable, transparent and centralized manipulations-proof.

Balance of self-sufficiency, decentralization and environmental integrity of the ecosystem is an intrinsic principle of critical importance.

Attempts to create carbon emissions-related blockchain systems and cryptocurrencies would fail if they lack of high quality underlying to support them. DAO IPCI essentially excludes emission of cryptocurrency, and is based on the independently assured environmental assets, including climate mitigation outcomes in the first instance, as the underlying.

Independent Entity accredited by the Operator assures the existence and quality of the underlying asset and preclusion of double spending. The latter is further supported by the internals of blockchain triple-entry accounting distributed ledger technology. Operator and independent entity ensure fundamental link of underlying assets claimed by the issuer and units issued through “two keys confirmation” proof-of-asset protocol.

Blockchain-based mitigation concept allows for the same protocols to be applied to other than climate change-related impacts, commitments, assets, rights and liabilities. Digital ecosystem is designed to offset collateral damage of economic activities by means of ‘physical’ or monetary instruments.

DAO IPCI is designed to be truly decentralized public blockchain-ecosystem and aims at creation of common business space to attract financing from investors not limited by financial capacity, location, or legal status with minimization of transaction costs, increased reliability and transparency of the whole process, which would be free of interference, interventions, manipulations or falsifications. The blockchain system as a whole is relatively immune to political, administrative, regulatory interventions of the governments. The open source code provides for securing fundamental requirement – minimum need for trust.

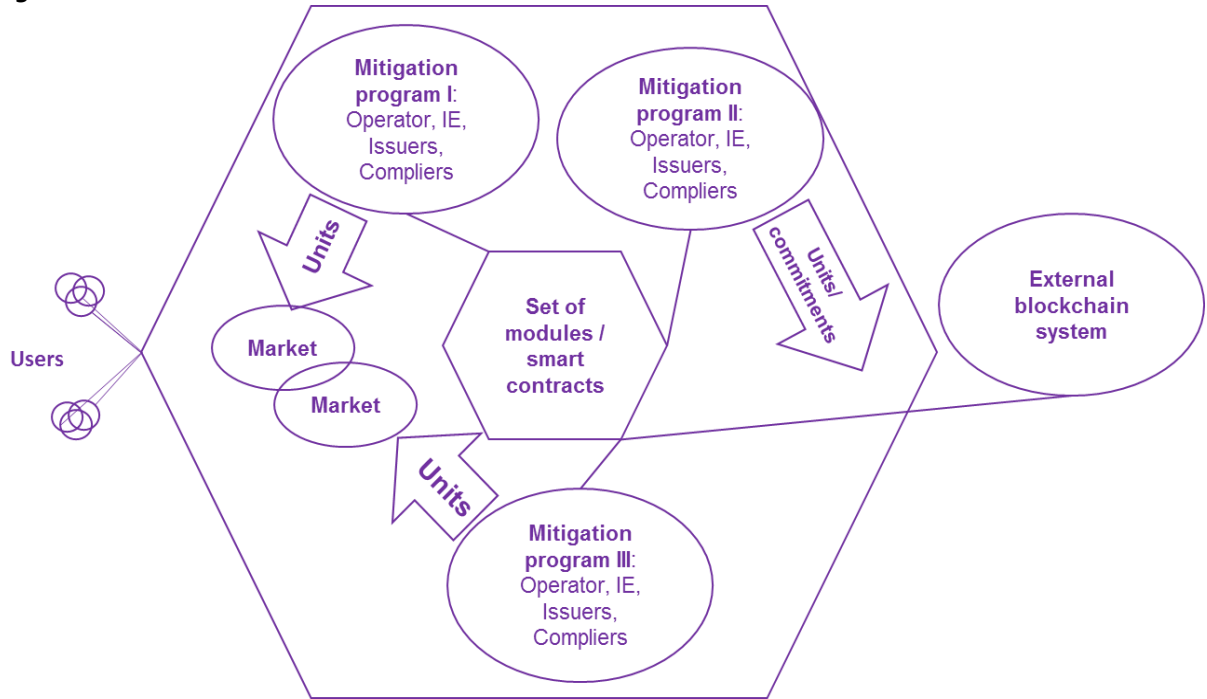
Decentralization is ensured at the key level of different mitigation programs operating in the same digital environment. There are no technical restrictions as to who may launch autonomous mitigation program in DAO IPCI. Existing mandatory, voluntary, large and small programs of diverse scopes of activities, jurisdictions, as well as businesses, NGOs and individuals may create independent DAO core to implement specific programs and projects and perform transactions in DAO IPCI. Independent mitigation programs within DAO IPCI may interlace and form a web of DAOs choosing modules and protocols they wish to share and have in common with their peers.

Mitigation Token, MITO, and MITO Market are designed to serve as an exchange unit and exchange for whatever asset-based instruments different programs operate with. MITO holders may evaluate and

assign cost to virtues and flaws of different programs and their instruments (units) by means of Mitigation Token as an exchange currency.

Furthermore, DAO IPCI architectonics provide for actual interaction of different asset-based systems on the Ethereum blockchain. The modules of external blockchain systems, DAOs, e.g. energy assets-based, may be included into DAO IPCI Core, and reflected in the decentralized application, and vice-versa.

Figure 1 – DAO IPCI architectonics



Participants, Mitigation Programs and Environmental Units, Functional Modules and Operations⁴

DAO IPCI stakeholder may choose either to join existing programs as user, issuer, complier or independent entity (under the program operator control) or to launch new program undertaking the functions of the operator for such new program.

DAO IPCI stakeholder may join existing program to

- perform as Issuer to supply environmental units
- perform as Complier to comply with particular mitigation policy, for example to offset carbon footprint
- trade environmental units to support mitigation projects as User
- provide professional services as an Independent entity

DAO IPCI stakeholder may launch new program by

- creating DAO
- accepting Mitigation Token Policy
- setting the rules of the new program
- bringing in and accepting issuers, independent entities, compliers and users to perform under the new program.

Rules and requirements of the programs include standard elements: regulator (operator), verification by independent entities, limits, validity periods, tools to cover risks, market institutions (trading) etc. In DAO IPCI these standard elements constitute system of smart contracts, adjustable for specific program requirements.

Environmental units (asset-based tokens) represent the main instrument of the programs in DAO IPCI. Various environmental units are issued in DAO IPCI blockchain under rules and requirements of specific programs. These programs may include: mandatory, voluntary and pilot environmental market programs, emission (or effluent) trading schemes, cap-and-trade programs, offset credit, carbon tax credit-based and hybrid programs, renewable standards and renewable energy certificates-based programs, other environmental mitigation market-based programs, and generally societal costs mitigation programs. Environmental units are generated in accordance with strictly structured procedure and distributed functions of the Issuer, the Operator and the Independent entity.

Environmental units are issued to DAO IPCI blockchain:

- Directly to the Issuer subject to program Operator’s approval on the grounds of verification of mitigation outcomes or quantified commitments compliance with program rules, requirements and criteria,
- On the grounds of the program Operator decision to accept environmental units issued by alternative programs and accounting platforms in their original form or to convert and exchange such units for the program units subject to compliance with the program requirements and criteria and confirmed cancelation of alternative registry entries and units turnover,
- Under collateral secured at the Security deposit contract,
- Under any climate change or environmental mitigation market-based programs subject to integrity of DAO IPCI, preclusion of double-spending and verification of integrity of digital units with environmental underlying.

⁴ For more details, information on procedures, terms, rates and manuals please see the “Manuals” and “Basic Terms and Rates” at <http://ipci.io>

Issuance of environmental units via Security reserve contract requires to reserve specific share of the units for specific period, established by the Operator on the grounds of independent assessment of related risks. The units would be burnt (retired) in case they are recognized as void, so that total amount of digital environmental units issued to the platform would in any event be equivalent to underlying. After the reservation period is over the units are returned to the Issuer's account. Security reserve contract may be used to withhold environmental units in order to avoid or correct input issuance data mistakes.

Issuance of the units may be performed through Security deposit contract, which provides for issuance against a collateral withdrawn in case the Issuer does perform in time.

DAO IPCI current procedure to issue assured or verified environmental mitigation units includes the following coordinated steps by the Issuer, Operator and Independent entity:

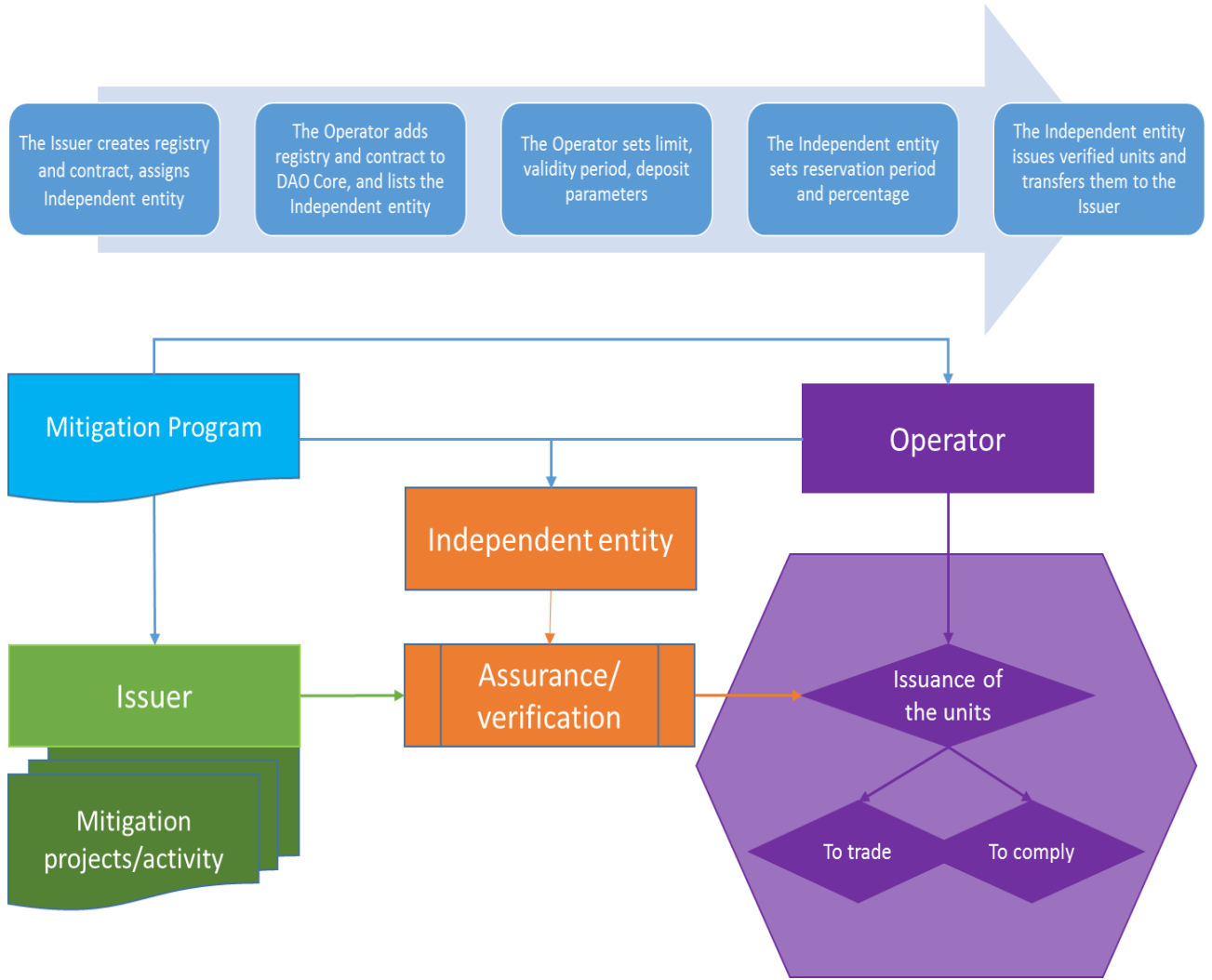
- The Issuer creates registry for particular units and security reserve or security deposit contract, assigns Independent entity
- The Operator adds registry and contract to DAO Core, and lists the Independent entity
- The Operator sets limit, validity period, security deposit contract parameters
- The Independent entity sets reservation period and percentage
- The Independent entity issues verified units or units secured by collateral deposit and transfers them to the Issuer.

The units then can be transferred, traded or used for compliance.

Apart of the environmental units' issuance protocol, the following DAO IPCI modules and operations are in place:

- Transfer of the units,
- Burning (retirement) of the units for compliance, e.g. to offset specific goods and services carbon footprint, at the Complier contract,
- Reservation, return and withdrawal of the units withheld at Security reserve and Security deposit contracts,
- Placing and executing sell/buy orders at MITO Market,
- Uploading the documents to IPFS to confirm and justify transactions,
- Optional identification of the agents (program participants),
- Tracking transaction history (log).

Figure 2 – Issuance of environmental units



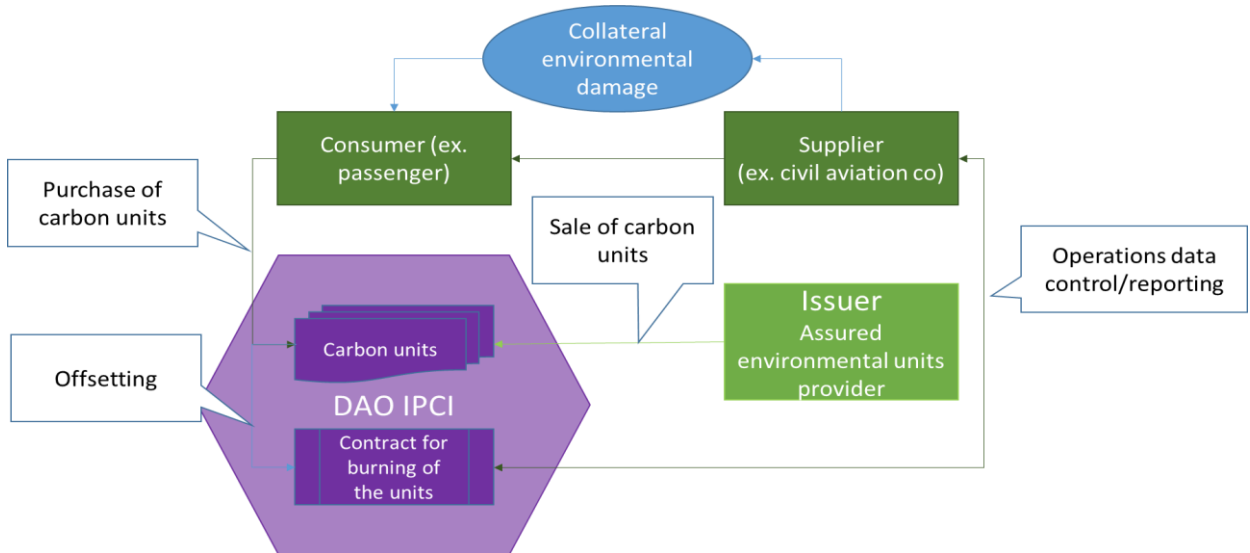
DAO IPCI offsetting carbon footprint scheme

Collateral damage of production, consumption, transaction of goods and services has become crucially important competitive factor, and mitigating this damage is now customary for many market activities. Offsetting carbon footprint scheme ensures irreversible burning of the units at the Compliers contract.

Offsetting carbon footprint functional scheme and further development (**Figure 3**):

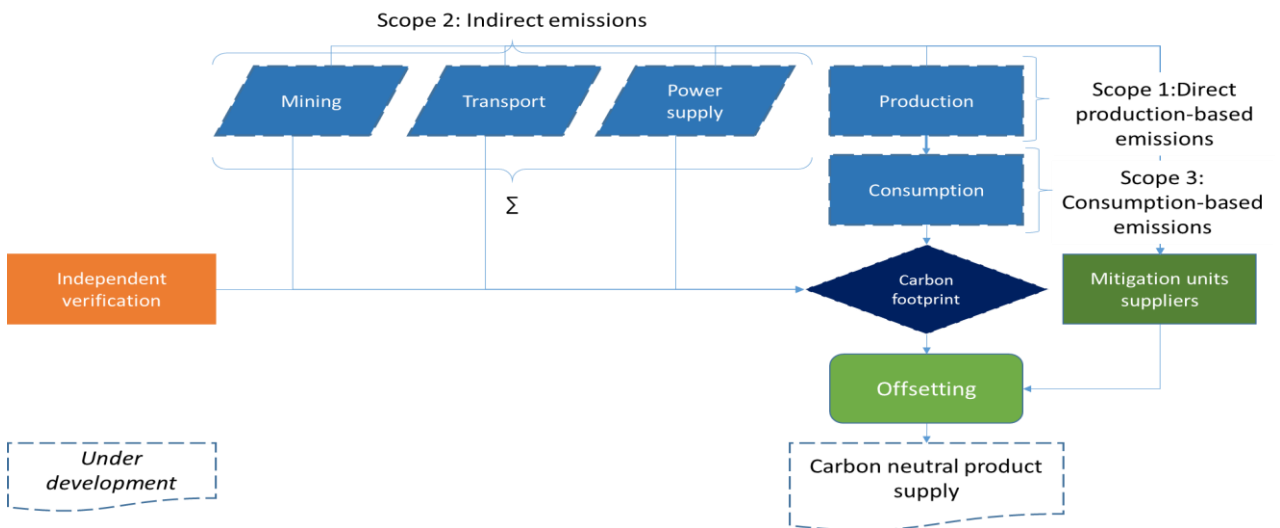
- Supplier of goods and services provides Consumer with verified data on carbon footprint (amount of CO₂e) of the goods and services acquired under specific deal
- Consumer acquires the correlated amount of carbon units at DAO IPCI from Issuer or holder of the units
- The units are transferred to the Burning Contract address
- Supplier requests/receives reports on relevant carbon footprint offsetting operations.

Figure 3 – Offsetting carbon footprint scheme



Further development implies introduction of accounting and offsetting of scope2 and 3 ‘upstream’ and ‘downstream’ impacts.

Figure 4 – Offsetting carbon footprint scheme development



'Blockchainization' of the Paris agreement

Article 6 of the UNFCCC Paris agreement has actually established global market-based interaction protocol for climate change mitigation programs and activities. DAO IPCI concept design provides digital environment to execute this protocol.

To 'blockchainize' article 6 of the Paris agreement, the following design has been developed with most of the modules and smart-contracts needed already in place:

Paris Agreement	DAO IPCI Blockchain Ecosystem	
Article 6	DAO Core/Modules	
<i>Parties voluntary cooperation</i>		
<p>1. Parties recognize that some Parties choose to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity.</p>	<p><i>'Quantified Commitment' and 'Quantified Impact' Module⁵</i> Nationally Determined Contributions (NDC) should be reflected as 'Quantified Commitments' and 'Quantified Impact'.</p>	<p><i>Creation of ITMO Market Module by UNFCCC Secretariat.</i> <i>Creation of independent DAOs of the Parties</i> Parties that have chosen to pursue voluntary cooperation create independent Operators DAOs with common market created by UNFCCC Secretariat for all Operators, which chose to cooperate.</p>
<p>2. Parties shall, where engaging on a voluntary basis in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards nationally determined contributions, promote sustainable development and ensure environmental integrity and transparency, including in governance, and shall apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement.</p>	<p><i>Issuance of environmental units via Security Reserve or Security Deposit Contracts</i> Common market token is an 'Internationally transferred mitigation outcome' (ITMO). Once issued ITMOs are deducted from respective Party NDC, which arithmetically means increase of Quantified Impact and decrease of mitigation contribution (Quantified commitment) by the amount of tCO₂e reflected in ITMO. Issuance of ITMO may be performed only by the Independent Entity and only to the address endorsed (listed as Agents) by the respective Party Operator. Double-counting is avoided, transparency ensured by inherent properties of public blockchain. Respective Party Operator and Independent Entity are responsible for compliance of ITMOs with sustainable development and environmental integrity principles.</p>	

⁵ Module under development

<p>3. The use of internationally transferred mitigation outcomes to achieve nationally determined contributions under this Agreement shall be voluntary and authorized by participating Parties.</p>	<p style="text-align: center;"><i>Complier Contract</i></p> <p>Authorization of private use (transfer or trading) of internationally transferred mitigation outcomes is provided and ensured by the protocols for Issuance of ITMO (see p.2). Privately used ITMO are not counted as contribution of any Party to the Agreement.</p> <p>Use of ITMOs for to achieve NDC may be used only via respective Party (Operator) Complier Contract(s). Only the units 'burnt' (irrevocably retired) at specific Compliers' Contract(s) may be counted as additional contribution.</p>
<i>Sustainable Development Mechanism</i>	
<p>4. A mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development is hereby established under the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to this Agreement for use by Parties on a voluntary basis. It shall be supervised by a body designated by the Conference of the Parties serving as the meeting of the Parties to this Agreement, and shall aim:</p>	<p style="text-align: center;"><i>Creation of independent DAO (Operator). Creation of the List of Independent Entities (ACL Storage). Creation of SDM Token Market</i></p> <p>UNFCCC body designated by the Conference creates DAO (Operator), creates List of Independent Entities, creates SDM token and SDM Market</p>
<p>(a) To promote the mitigation of greenhouse gas emissions while fostering sustainable development;</p>	
<p>(b) To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party;</p>	<p style="text-align: center;"><i>Issuers addresses and contracts</i></p> <p>The Operator shall approve the addresses (list as SDM Agents) and Issuers' contracts only for the Issuers' listed as Agents by respective Party Operator (see p.2 <i>Issuance of ITMO via Security Reserve or Security Deposit Contracts</i> above)</p>
<p>(c) To contribute to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can also be used by another Party to fulfil its nationally determined contribution; and</p>	<p style="text-align: center;"><i>Complier Contracts</i></p> <p>SDM tokens (emission reductions) shall be used by another Party to fulfil its nationally determined contribution via respective Party (Operator) Compliers Contracts. Only the units 'burnt' (irrevocably retired) at specific Compliers' Contract(s) may be accounted to fulfill NDC. (see p. 3 <i>Complier Contract</i> above)</p>
<p>(d) To deliver an overall mitigation in global emissions.</p>	<p style="text-align: center;"><i>Quantified Impact module</i></p> <p>Emission reductions represented by SDM tokens should actually reduce registered quantified impact or restrain quantified commitments</p>
<p>5. Emission reductions resulting from the mechanism referred to in paragraph 4 of this Article shall not be used to demonstrate achievement of the host Party's nationally determined contribution if used by another Party</p>	<p style="text-align: center;"><i>Issuance of environmental units via Security Reserve or Security Deposit Contracts. Quantified commitments and Quantified impact module</i></p>

<p>to demonstrate achievement of its nationally determined contribution.</p>	<p>Once issued emission reductions (represented by SDM tokens) are deducted from respective Party NDC, which arithmetically means increase of Quantified Impact and decrease of mitigation contribution (Quantified commitment) by the amount of tCO₂e reflected in SDM tokens.</p>
<p>6. The Conference of the Parties serving as the meeting of the Parties to this Agreement shall ensure that a share of the proceeds from activities under the mechanism referred to in paragraph 4 of this Article is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.</p>	<p style="text-align: center;"><i>Commission fees</i></p> <p>Commission fees in DAO IPCI are established by independent Operators</p>

Mitigation Token

DAO IPCI Mitigation Token (MITO) is sought to provide for exchange of numerous and diverse asset-based tokens representing societal costs mitigation outcomes. Namely and in the first instance, GHG emissions limited rights and reductions (carbon emission quotas and credits) are the assets that become fungible via MITO and MITO market. Distinctive characteristics of the two types of DAO IPCI tokens are that only one of them, MITO, is based on the protocol to integrate the ecosystem while the rest of tokens represent diverse regulated mitigation compliance units as underlying.

Furthermore, mitigation compliance units like carbon emission quotas and credits, other emission or effluent credits, renewable energy certificates, and even quantified social benefits ('environmental units') are regulated by wide variety of programs and in principle, nothing can prevent jurisdictions, entities, businesses, NGOs or individuals from launching new and independent result-based mitigation program in DAO IPCI. New programs are eligible to issue new mitigation outcomes-based tokens subject to compliance with the program rules and independent assurance. Existing and newly launched programs may create 'sovereign' representations in DAO IPCI in the form of autonomies (DAOs). These "representations" are encouraged to adhere to MITO emission protocol instead of issuing new protocol-based tokens to ensure integrity and value of DAO IPCI network while maintaining decentralized nature of the ecosystem.

MITO emission protocol is subject to performance under these complex requirements.

Mitigation Token (or MITO) is the key element to provide for transactions' efficiency and integrity of DAO IPCI ecosystem.

As explained in more detail below, MITO is a protocol-based token and designed to serve inter alia a digital carbon-pricing instrument, a digital CO2 cost equivalent.

Mitigation Token sole purpose is to provide market exchange operations with environmental units issued to the environmental units' registries by independent entities under the rules and supervision of operators, which accept MITO policy.

MITO is inherently appropriate and designed for executing DAO IPCI smart contracts, including placing and executing buying and selling of environmental units' orders, as a collateral under security deposit contract, MITO market commission fee.

MITO emission implies strict limitation of the potential amount of emission, strict adherence to the interests of the MITO holders, the interests of the issuers of environmental units and participating environmental programs' compliers.

To avoid dilution and preserve the interests of MITO holders, 50% of MITO newly issued after initial emission of 10,000,000, shall be distributed to existing MITO holders.

MITO holders receive the right to exchange them for environmental units at MITO market.

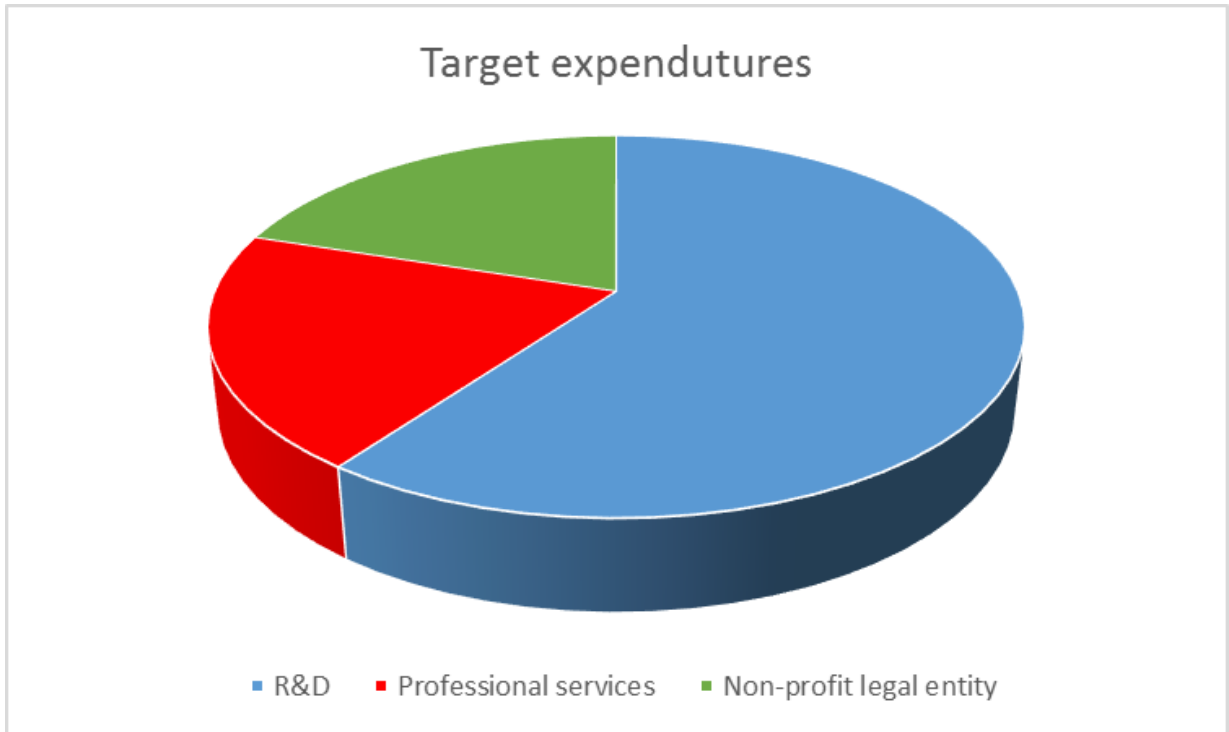
IMPORTANT: MITIGATION TOKEN DOES NOT REPRESENT, NOR GIVES RIGHTS TO ANY SHARE OF REVENUES WHICH MIGHT BE RECEIVED VIA TRANSACTIONS IN THE ECOSYSTEM, THROUGH OPERATIONS OF DAO IPCI, ETC. NOR SHALL MITO GIVE ANY OF ITS HOLDERS ANY VOTING RIGHT WHATSOEVER INFLUENCING THE DAO IPCI IN ANY MANNER (INCLUDING, BUT NOT LIMITED TO, ITS OPERATIONS, GOVERNANCE, ETC.).

It is supposed (but is subject to possible alterations and changes if the efficient development of DAO IPCI and the MITO market so require, as maybe decided by the Team of Founders at any point in time), Genesis

Operator and the Team of Founders (see: ipci.io/team) shall perform initial emission and offering of Mitigation Token

- to boost non-commercial research and development of economic and IT protocols needed to sustain and expand DAO IPCI mitigation ecosystem (60% of funds raised),
- to establish a non-profit legal entity for these purposes (20% percent of funds raised),
- to obtain legal and other professional expertise and services needed to support implementation (20% of funds raised).
-

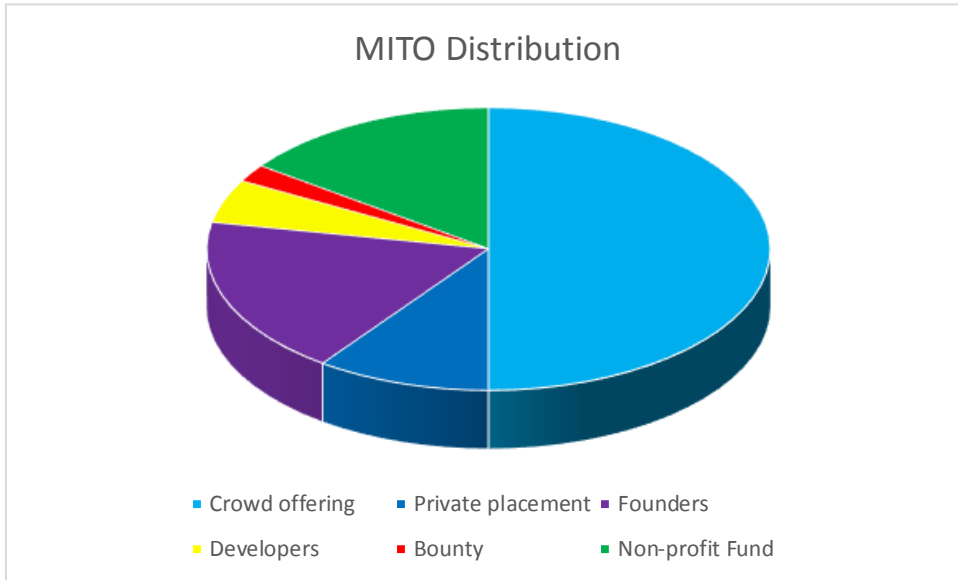
Figure 5 – Target expenditures for the initial emission and offering of Mitigation Token



Initial emission of Mitigation Token is limited by 10,000,000. Initial emission and offering of Mitigation Token shall be performed in two stages: Presale and ICO. Amount of MITO for presale is limited by 10% of total initial emission of Mitigation Token.

Allocation of initial MITO emission is set to provide 60% of tokens for crowd offering and private placement, 25% distributed as Founders', Developers' remuneration for early creation and launch of minimum necessary functionality product, 15% reserved and withheld for non-profit Fund.

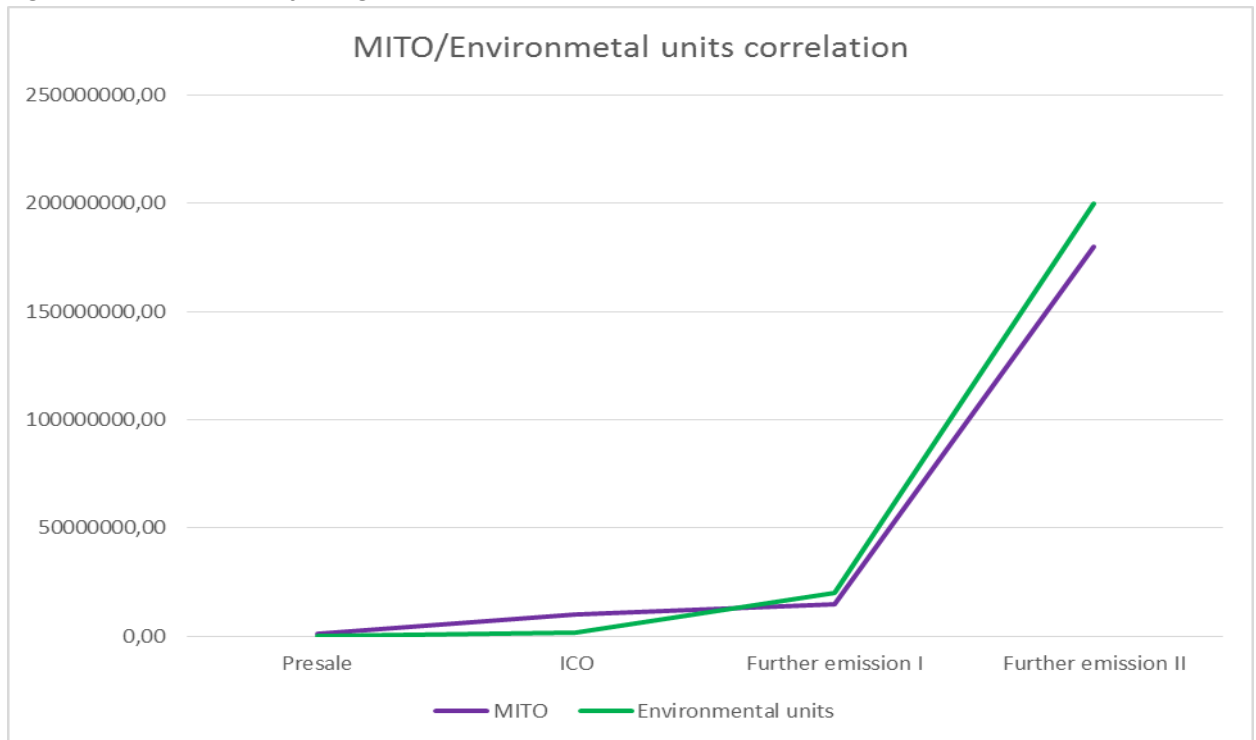
Figure 6 – Distribution for the initial emission and offering of Mitigation Token



Further emission of MITO shall be governed by MITO emission protocol and pool of decentralized autonomous organizations, which agree on MITO emission policy and abstain from emission of alternative digital currencies to be exchanged for environmental units or other independently assured mitigation outcomes (“MITO pool of DAOs”). Further emission of MITO shall be possible after MITO Pool of DAOs is formed and MITO emission protocol is refined but no sooner than one year after the start of initial emission and distribution.

The ultimate quantitative limit for emission of Mitigation Token is equal to conservative evaluation of global carbon emissions budget of 600 billion units (tCO₂e) with ultimate time limit for emission set to the end of the 21st century, which actually limits ultimate emission below the number of mitigation compliance units to be definitely issued within this period of time.

Post-ICO MITO emission protocol shall ensure direct correlation of current cap for MITO emission and the sum of environmental units secured and accessible via environmental units’ registries minus the amount of MITO previously issued. Thus, MITO-to-environmental units’ ratio shall be predetermined by the protocol and reach maximum at the stage of ICO, and with growth of environmental units issued further MITO emissions shall be close to one with a certain lag in favor of environmental units due to the time needed to agree on and perform further emissions (Fig.7).

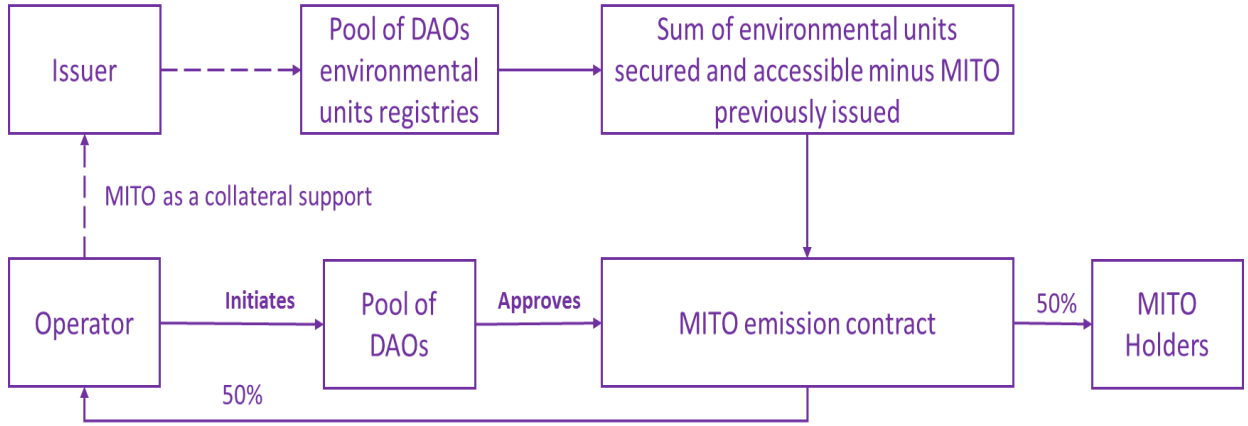
Figure 7 – Correlation of Mitigation Token and environmental units

As post-MITO emission protocol limits their amount to the sum of environmental units accessible via environmental units registries of ‘the MITO Pool of DAOs’, thus MITO serves inter alia as a digital carbon price equivalent, a digital carbon cost equivalent. Along with global trend toward the increase of value of climate change mitigation outcomes and cost of GHG emissions, this algorithm would support long-term increase of value of Mitigation Token and of DAO IPCI mitigation ecosystem. MITO emission protocol provides for strict correlation of the volume of MITO with the volume of assured environmental mitigation units, thus potentially hedging volatility of prices at carbon and other environmental markets.

Current version of post-ICO MITO emission protocol design suggests that:

- Any Operator, who has entered the MITO pool of DAOs and agreed to MITO emission policy, would be eligible to initiate emission of MITO in the amount not exceeding the sum of environmental units secured and accessible via MITO pool of DAOs environmental units’ registries minus the number of MITO previously issued subject to approval of the MITO pool of DAOs;
- To protect early buyers and holders of MITO post-ICO emission shall be preformed not earlier than one year after the ICO starting date
- 50% of MITO newly issued after initial emission of 10,000,000, shall be distributed to existing MITO holders, 50% to the Operator who initiates their emission;
- An Operator may use MITO to support project development (project pipeline) through the security deposit contract by providing MITO as a collateral;
- MITO pool of DAOs may deactivate the Security deposit contract in case it is compromised, and return MITO collateral.

Figure 8 – Mitigation Token post-ICO emission model



Specific MITO emission parameters are made public and open for comments at ipci.io and at mito.ipci.io.

Limited pilot emission in the amount of 10,000 has been performed by Genesis Operator to provide for pilot operations with public information at ipci.io.

Climate change and other societal costs' mitigation programs are welcome to join efforts in developing common ecosystem and non-profit consortium.

Prospects and plans of development

Long-term prospects of DAO IPCI development are limited only by its' functional capacity as the trends are evidently in favor of environmental markets' and specifically carbon markets' expansion both in scale and number, linkage and integration with a perspective of ultimate creation of common market space with fungible instruments. DAO IPCI is a prototype of such market space and units.

While the initial objective is to provide existing markets with a 'blockchain option' or 'blockchain representation', the goal is also to create a way for environmental markets to evolve toward truly decentralized and free personal market choice model.

Near-term prospects rely on primary demand development at the account of large corporate and regional (subnational) climate programs (including global pilot market mechanism for international civil aviation), carbon footprint offsetting programs, and consumer demand development.

Plans of development specifically include:

- Detailed tracking of the environmental units origin (supply-chain and life-cycle),
- Introduction of secured by collateral quantified commitments-based environmental units,
- Mechanism for joint offsetting of carbon footprint by Supplier and Consumer applicable at retail level as well as up to the level of supporting carbon neutral export programs,
- Linking DAO IPCI with programs and systems, which are based on physical measurement and IoT-based monitoring of anthropogenic climate impact in real-time mode,
- Mechanism to support performance under Green Bonds' commitments,
- Mechanisms and fungible instruments to support linkage of different GHG emissions limitation and reduction/removal systems, schemes, programs, and standards,
- Development of OTC transactions and links with environmental, carbon, securities and commodities exchanges,
- Development and introduction of environmental units-based derivatives
- Mechanism to support hedging volatility of prices for different schemes, systems and programs carbon compliance units,
- Upon reaching adequate level of readiness and matureness of the ledger development of virtual investment structure shall be considered.

Further development implies upstream and downstream modules development. Upstream modules are the first in the line, and would provide for more specific tracking of a supply-chain (see **Figure 4**). That supply chain ends with an approved and verified environmental unit, for example, emission reduction credit. The supply chain may include: a project concept, the concept then is developed in a standardized format, then the concept is supported by engineering and financial documentation, which is validated by an independent entity, and then submitted to regulator (operator of the program), public comments and approvals are received, and eventually environmental units are registered for use - - for sale or compliance.

Blockchain allows users to track the time- and date-stamped ownership of electronic asset and its' supply-chain and life cycle. Blockchain technology is a decentralized ledger that allows an asset owner to hold assets and transfer or sell it to another peer on the basis of triple-entry accounting (momentum) accounting. Or, the assets holder can add more information to the initial assets so a documentation chain is credited.

Tracked data could include, but might not be limited to:

- Name and contact information of person(s) and firms entering data

- Company name
- Attributes associated with an environmental unit (credit)
 - Deforestation impacts
 - Water management impacts
 - Biodiversity impacts,
 - Gender impacts
 - Health impacts
 - Number of GHG emission reduction projected by year
- Time, date and location of data entry,
- Testing, measurement, and certification protocols used,
- 3rd party attestations, and
- Insurance company of auditor.

Each document is linked in an electronic chain, and the entire audit trail can be reviewed.

Auditability also supports apportioning liability because every claim can be pointed to a responsible party, so the final purchaser can be better prepared to understand their reputation and commercial risks associated with an environmental unit purchase and use.

Blockchain can provide the auditability and liability assignment industry demands and many of the features are available today. As of today, every DAO IPCI blockchain transaction is supported by documents uploaded to IPFS.

As to downstream modules development, they imply market evolvement, and some of them have been described above.

Ongoing and perspective plans require design and development of collateral associated web-resources, interfaces and applications, including API, websites, trading platform, blockchain data visualization and filtering, communication channels to link with financial, banking, insurance products and systems. Unlike design, development and introduction of core protocols, modules, smart-contracts, which are essentially open-sourced, this is a sphere for business development and commercial services.

DAO IPCI is developed in cooperation with Airlab within and on the basis of the “Ethereum Platform”. Open source software of the “Ethereum Platform” is used and developed under the terms of [GNU Lesser General Public License](#) and [Disclaimer of Liabilities and Warranties](#).

DAO IPCI source code, core protocols, modules, smart-contracts are available on the basis of the [3-Clause BSD License](#) and are

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THE PROGRAMS OPERATING IN DAO IPCI

The Integrated Program for Climate Initiatives (the IPCI)

The Integrated Program for Climate Initiatives is the genesis climate program operating in DAO IPCI.

Rationales and motives for implementation of the IPCI

- Promoting implementation of “green economy” and low-carbon development principles on the basis of direct and explicit insertion of environmental costs and values into practice, business custom, transactions, economic activity, including investment, procurement, and decision-making policies,
- Taking into consideration unique, universal and global economic and environmental properties of GHG emissions and climate change mitigation outcomes-based assets and liabilities,
- With a perspective of establishment of a new system of international climate commitments and mechanisms on the basis of the Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCCC),
- Forestalling limitation of greenhouse gas emissions by the governments
- With a view on further development and integration of international GHG emission control systems and programs,
- Overcoming jurisdiction barriers and intermediary transaction costs barriers for environmental mitigation.

The IPCI principles

- Entitlement of the companies and individuals to keep and trade the fruits of their environmental mitigation activities,
- Creation of common environment and common space for fair international environmental footprint-based competition,
- Compatibility of rules, regulation mechanisms, commitments and rights,
- Fungibility and transferability of mitigation instruments and outcomes.

IPCI ends and means

IPCI goal is to integrate climate initiatives in the form of distributed network of mitigation contributors on the basis of common principles, rules, criteria, and platform to account for quantitative commitments-based and project-based mitigation outcomes, to achieve absolute emission reduction targets and ultimate balance of anthropogenic greenhouse gas emissions and anthropogenic increase in removals of GHG by sinks and reservoirs (“carbon neutrality”).

IPCI goal is sought by means of introduction of progressive adjustments to existing GHG emission reduction methodologies, standards and rules; by means of Carbon Registry linked to decentralized smart contracts and blockchain technology-based platform (DAO IPCI) for trading environmental assets and liabilities, including registration and transaction data for carbon compliance units, Transferrable Mitigation Units (TMU), environmental mitigations credits eligible under IPCI goals and requirements.

Basic IPCI Requirements and Criteria

The IPCI ensures overall absolute emissions reduction and targeted anthropogenic increase of GHG removal by sinks in whole through individual and joint activities of the stakeholders in accordance with international agreements, principles, rules, and modalities adopted in pursue of UNFCCC. Basic Program Requirements shall include those consistent with guidance to be adopted by the UNFCCC Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement regarding the use of internationally transferred mitigation outcomes.

The Program provides for accounting of mitigation outcomes (Transferrable Mitigation Units - TMU), which comply with the principles of sustainable development, socio-environmental integrity, transparency, accuracy, completeness, comparability and consistency, and robust reporting, to guarantee, inter alia, the avoidance of double counting, and provide for responsibility of the Initial Owner of mitigation units for compliance with these principles with regards to TMU issued to his Account for the whole accounting lifecycle of the units.

IPCI supports development, expansion and global sharing of precise physical measurement and monitoring-based verified carbon products to further promote direct management of anthropogenic greenhouse impact to the climate.

Environmental unit under the Integrated Program for Climate Initiatives is Transferrable Mitigation Unit (TMU) equal to one ton of CO₂-equivalent, embracing:

- *Carbon offset credits* – actual and absolute, independently verified, quantitatively measurable, irreversible, permanent or long-term, secure or insured, additional or target-oriented, not otherwise required by compulsory regulations anthropogenic GHG emission reductions or removals by sinks;
- *Quantitative GHG emission limitation and reduction, carbon neutrality, carbon footprint commitment-based compliance outcomes*, eligible under the requirements of the Program.

Mitigation outcomes eligible under IPCI for registration and accounting should comply with the following basic requirements:

1. Cover certain set of greenhouse gases, existing sources, installations or sinks.
2. Are independently verified absolute target-based reductions of emissions relative to baseline actual emissions of the given set of existing sources and installations or for anthropogenic targeted increase of removal of greenhouse gases relative to baseline actual absorption by the established set of sinks, or provide for direct irreversible destruction of greenhouse gases, anthropogenic sources of emissions, or GHG long-term removal, conservation, capture and storage.
 - a. Baseline scenario emissions cannot exceed baseline actual emissions. Baseline actual emissions are calculated based on consecutive 12 or 24-month period immediately preceding target-based mitigation activity.
 - b. Removals should be independently verified as target-based, not otherwise achievable under natural conditions in the absence of mitigation activity.
 - c. Precise physical measurement-based monitoring, reporting and verification in real-time mode should be applied where technically and economically applicable.

- d. Effective period before revocation (annulment) or reassurance of the units depending on the risk related to issuance of the units, sector of sources or sinks, applicable methodology of mitigation is specified as limited by certain period or unlimited and confirmed by the Independent Entity.
3. Relate to certain independently verified commitments regarding quantitative emission limitation and reduction, or quantitative balance between anthropogenic emissions and anthropogenic removals by sinks, or quantitative commitments to reduce carbon footprint of production, goods and services and to certain accounting period starting the 2013 -2020 period.
 - a. Baseline year is the year immediately preceding the effective period of quantitative commitments starting the year 2013.
 - b. Quantitative commitments-based mitigation outcome should be at least 5% of baseline quantitative level for the accounting period.
 4. Are based on robust monitoring and reporting system. Efficiency of the system is verified by the Independent Entity.
 5. Are not otherwise required by compulsory regulations or registered as carbon compliance units, project results or mitigation outcomes, commitments and pledges under other than IPCI programs and mechanisms of limitation and reduction of GHG emissions.
 6. Are enforced by pledges of the Initial Owner and by reservation of certain share of the units to ensure compensation or revocation of TMU in case mitigation outcomes or mitigation outcomes-based units issued are legally recognized as void under IPCI for physical or legal reasons within one calendar year after such legal decision is confirmed.
 7. Full potential of emissions from the new sources is subject to offsetting in full by absolute reductions of emissions from existing sources.
 8. Indirect emissions, consumption-based emissions, and quantitative mitigation outcomes from reduced consumption of electricity, heat, fossil hydrocarbon fuels, including the outcomes of substitution of fossil hydrocarbon fuels-based power generation by power grid-connected renewable energy sources-based power generation should be calculated on the basis of factors of emissions confirmed by specific relevant producers and suppliers of electricity, heat or fuels, or on the basis of most conservative assessment of the grid emission factor and assured by the Independent Entity.
 - a. The Independent Entity has verified cross reference of indirect emissions reductions, consumption-based emissions reductions with relevant direct emissions and has verified absence of double counting of direct emission-based and indirect emissions-based mitigation outcomes.
 9. Mitigation outcomes are achieved in accordance with specific project methodologies or relative to quantitative commitments compliant with IPCI requirements and criteria and confirmed by the Independent Entity.
 - a. Relevant methodologies, commitments and statements of the Independent Entity are provided to the IPCI Coordinator.
 10. Independent Entity is an entity with sufficient relevant professional experience, expertise, competence and high international reputation in the sphere of auditing services, which accepts

these Basic IPCI and Carbon Registry Requirements and Criteria for Units of Mitigation Outcomes and is accredited by IPCI Coordinator.

11. Calculations and independent assurance of original data, baseline level of emission, outcomes and relevant quantity of TMU comply with existing IPCC methods and guidance under the UNFCCC, and standards and methodologies based on and derived from methods and guidance under the Convention. Applicable standards and methodologies include
 - a. UNFCCC Kyoto Protocol CDM and JI methodologies,
 - b. The International Auditing and Assurance Standards Board (IAASB) issued the International Standard on Assurance Engagements (ISAE) 3410, Assurance Engagements on Greenhouse Gas (GHG) Statement,
 - c. ISO 14064 series standards, and its' national interpretations,
 - d. ISO TS 14067: 2013, and its' national interpretations (ex., GOST R 56276-2014),
 - e. "Gold Standard",
 - f. "Verified Carbon Standard",
 - g. "GHG Protocol",
 - h. Physical measurement-based real time mode monitoring protocols,
 - i. et al

subject to calculation of baseline emissions and outcomes relative to baseline actual emissions of the given set of sources and installations and for anthropogenic removal of greenhouse gases relative to baseline actual conservation of greenhouse gases by established set of sinks, taking into account direct irreversible destruction of greenhouse gases and anthropogenic sources of emissions or GHG long-term removal, conservation, capture and storage.

12. Carbon footprint assessment for goods and services, commodities and products to be registered complies with the following requirements:
 - a. Scope, set of sources of direct and indirect GHG emissions related to specific links and activities of the product life-cycle are defined;
 - b. Calculations and assessments comply with the chosen applicable standard and methodologies according to p. 11;
 - c. Owners or operators of the sources of GHG emissions related to specific links and activities of the product life-cycle have confirmed acknowledgment of inclusion of relevant data into the goods and services, product or commodity carbon footprint assessment;
 - d. Carbon footprint assessment is verified by the Independent Entity;
 - e. Carbon footprint assessment and offsetting carbon footprint policy and offer of the supplier are disclosed, publically available and communicated to the customers, buyers of the goods and services, product or commodity.

13. The IPCI allows for registration of carbon units issued by alternative programs and accounting platforms or for conversion and exchange of such units for TMU subject to compliance with IPCI

requirements and criteria and confirmed cancelation of alternative registry entries and units turnover. In case carbon units are transferred from the IPCI Carbon Registry or from DAO IPCI to alternative accounting systems, the IPCI or DAO IPCI Operator shall cancel relevant registration entries and units turnover.

14. The Program stipulates the registration of actions and outcomes in the Non-State Actor Zone for Climate Action platform (FCCC/CP/2015/10/Add.1 1/CP.21 Adoption of the Paris Agreement, 117, 134).

IPCI Coordinator and Independent Registry

The IPCI Coordinator is Russian [Non-Profit Foundation “Russian Carbon”](#).

IPCI and Carbon Registry Council

The IPCI Council – an advisory body comprising of highly reputable international experts – is authorized to review and evaluate basic IPCI rules, requirements and criteria to support compatibility of the Carbon Registry and DAO IPCI ledger with highest international standards.