

Project: CB264 NutriTrade

DELIVERABLE 2.1.1

DESKTOP STUDY OF PLATFORMS

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Table of contents

1.	Introduction.....	3
2.	Online charity	5
	Concept.....	5
	Supply and demand	5
	Role of the platform.....	5
3.	Crowdfunding platforms.....	7
	Concept.....	7
	Supply and demand	7
	Role of the platform.....	7
4.	Service brokerage platforms.....	10
	Concept.....	10
	Supply and demand	10
	Role of the platform.....	10
5.	Voluntary carbon offsetting platforms	12
	Concept.....	12
	Supply and demand	12
	Role of the platform.....	12
6.	Water quality trading.....	14
	Concept.....	14
	Supply and demand	14
	Role of the platform.....	14
7.	Conclusions	21
	Sources.....	23

1. Introduction

In order to sketch out initial ideas for the design of a nutrient emissions offsetting platform, a look was taken at selected existing platforms. The objective was to reveal the magnitude of concepts for fundraising and offsetting, and - based on publicly available information - to study their service concepts by answering the following questions

- What do the users need the service for? (Activities enabled by the platform)
- What happens at the platform? (The user interface)
- What does the service do behind the scenes? (Back office processes)
- What support is needed from external partners? (External processes)

These findings can later be reflected with the needs of the potential users of a nutrient trading platform (to be collected in a stakeholder workshop and in stakeholder interviews).

Five types of platforms and schemes were chosen for study:

- Virtual charity websites such as GiveDirectly.org,
- Crowdfunding platforms such as chuffed.org,
- Service brokerage platforms such as Airbnb.com,
- Voluntary carbon offsetting platforms such as Natural Capital Partners, and
- Water quality trading schemes

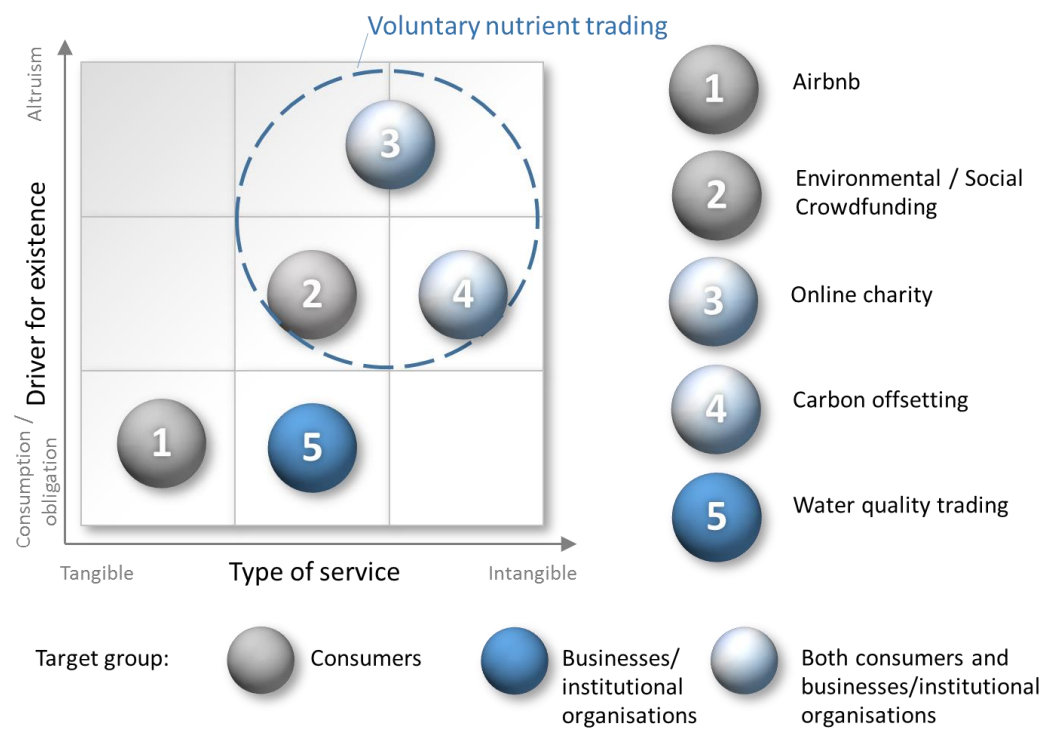
The platforms are very different from each other in terms of their drivers of existence: some are driven by altruism (virtual charity, to some extent also crowdfunding and carbon offsets), others by private consumption interests (service brokering) or by governmental regulations (water quality trading).

There are also differences in the type of services provided: in some cases, they are clearly observable to the buyer (Airbnb, some crowdfunding projects) and so the benefits obtained by the user can be indicated by reviews etc. For others, the benefits provided remain somewhat (carbon offsets and water quality trading) or highly abstract, such as for virtual charity, where the donors will not know exactly to what extent their gift adds to the wellbeing of people.

As for nutrient emissions offsetting, the concept can be characterized as being more inclined towards altruism than consumption or obligation, and the provided services are quite intangible.

Placing the studied platforms and the planned nutrient emissions offsetting in a space matrix based on these two dimensions (driver of existence, type of service provided), we realise that the platforms closest to nutrient emissions offsetting are online charity, crowdfunding and voluntary carbon offsetting (Figure 1). Of these three, crowdfunding mainly targets consumers whereas the other two focus on both consumers and businesses/institutional organisations.

Figure 1. Matrix of platforms



2. Online charity

Concept

GiveDirectly (www.givedirectly.org) transfers unconditional cash to households in developing countries via mobile phone-linked payment services. It targets extremely low-income households and the standard model is to grant about 1,000 USD to each recipient household over approximately four months to one year, after which recipients become ineligible for future transfers.

Supply and demand

GiveDirectly currently channels institutional, government, and private donors' contributions mainly from the U.S. to households in Kenya and Uganda.

Role of the platform

GiveDirectly focuses its work on

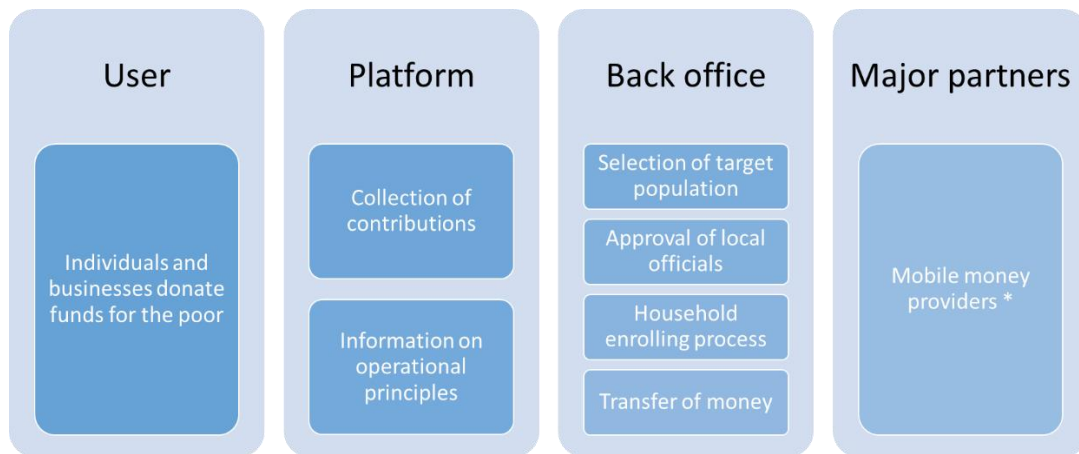
- 1) Collecting of contributions via an online payment platform. Alternative donation options are also available to avoid the service fee of an online payment processor.
- 2) Selection of target population with the help of available poverty statistics and field inspections. Availability of a mobile banking platform, access to mobile technology by recipients, political stability and corruption in government affairs have also been considered when choosing locations for charity. Before beginning to work in a given area, GiveDirectly obtains permission from local officials. This process can involve officials from the national to the village level and generally requires a series of conversations to get all the relevant stakeholders on board. GiveDirectly signs written agreements with or obtains approval letters from local officials to formalise permissions.
- 3) Determining the eligibility of households. Field staff collect data about each household and note if the household is eligible for transfers. The criteria for eligibility in a campaign depends on where the campaign is located. GiveDirectly sends different field staff to perform back checks to prevent fraud. Finally, households marked as eligible in the census are registered to the campaign and given access to the mobile banking platform. A portion of the registered households are revisited in audits. GiveDirectly aims to enroll all eligible households to prevent conflict in local communities.
- 4) Transfer of money. GiveDirectly sends transfers to recipients via mobile money providers.
- 5) Monitor of reception of money. GiveDirectly field staff make multiple phone calls to recipients as transfers are being sent to verify that the transfer was received. Occasionally, longer surveys are carried out to ask recipients a number of questions including whether they received the transfers or had any trouble withdrawing funds, how they spent the funds, and whether there were any problems in their community relating to the transfers. GiveDirectly also maintains a phone "hotline" for recipients to call if they have any questions about the transfers or issues in obtaining funds.

GiveDirectly actively evaluates its programmes, also in a long-term. About 85% of GiveDirectly's total expenses are transferred to recipients.

GiveDirectly has considered some ideas for future experimentation:

- Providing cash transfers in an urban setting, as humanitarian relief, on behalf of institutional donors
- Facilitating the pooling of recipient funds for public goods projects
- Implementing a lifetime basic income guarantee
- Serving as the payment provider at cash out days

Figure 2. Simplified service concept of GiveDirectly



* A mobile money provider allows recipients to receive, send, deposit and withdraw funds on their mobile phones.

Figure 3. Screenshot of GiveDirectly website

GiveDirectly
Send money directly to the extreme poor.

What We Do Evidence Performance Discussion About Us Join Us [Give Now](#)

You're giving directly to the extreme poor.

DONATION
☒ One-time ☐ Monthly
 More payment options are shown below.

☒ Any Country ☐ Kenya ☐ Uganda ☐ Experimental

DONOR INFORMATION
 ☒ Sign up for email newsletter

☐ Notify someone that this is in their honor or someone's memory.

PAYMENT INFORMATION

Problems donating? Please let us know at info@givedirectly.org.

Donations are tax-deductible in the United States to the extent allowed by law. Our federal EIN is 27-1661997.

ALTERNATIVE DONATION OPTIONS

Our online payment processor charges a service fee of approximately 3%. You can donate via check, PayPal Giving Fund, or ACH transfer if you wish to avoid this.



GiveDirectly is a top recommended charity by the leading evidence-

3. Crowdfunding platforms

Concept

Crowdfunding is the practice of funding a project or venture by raising monetary contributions from a large number of people, today often performed via internet-mediated registries. Crowdfunding is a form of alternative finance, which has emerged outside of the traditional financial system. It has been applied to e.g. movies, free software development, social and cultural projects, scientific research, and start-ups.

There are several crowdfunding concepts, of which rewards crowdfunding and charity crowdfunding in particular are of relevance here. Rewards crowdfunding refers to pre-sales of a product or service and charity crowdfunding to the collective effort of individuals to help charitable causes. Examples of crowdfunding platforms for nonprofits or civic projects include e.g. Razoo, Generosity, Spacehive and Neighbor.ly. In Finland, charity crowdfunding is possible through Mesenaatti.me.

Supply and demand

The crowdfunding model is based on three types of actors: the project initiator who proposes the project to be funded; individuals or groups who support it; and a moderating platform that brings the parties together to launch the idea.

Role of the platform

There are for-profit platforms and social enterprises. The former charge a commission (around 5%) of the donation and a credit card fee, the latter only a credit card fee.

Typically, the platforms encourage creation of campaigns with supporting materials (written and video guides, case examples). They check the project ideas against few criteria, e.g. tangibility of results, civic value, and the existence of a person or organisation. Once successfully verified, the ideas are posted on the platform and a fundraising campaign will then run for a determined period of time (e.g. up to 60 or 120 days after the launch). Donors can determine their contributions, which can be made electronically. Many campaigns utilise a set of rewards (perks) for the donors of crowdfunding projects. Tangible perks are things the project is offering to funders when they donate a certain sum - they function as incentives to giving and are ways of saying thank you.

In a "Keep-it-All" (KIA) model the applicant sets a fundraising goal and keeps the entire amount raised regardless of whether or not they meet their goal, whereas in a "All-or-Nothing" (AON) model the applicant keeps nothing unless the funding goal is achieved, so no substandard product or service will be released.

There is no information about ex-post verification of projects on the platforms.

As an example, Australia-based chuffed.org is presented.

Figure 4. Simplified service concept of chuffed.org

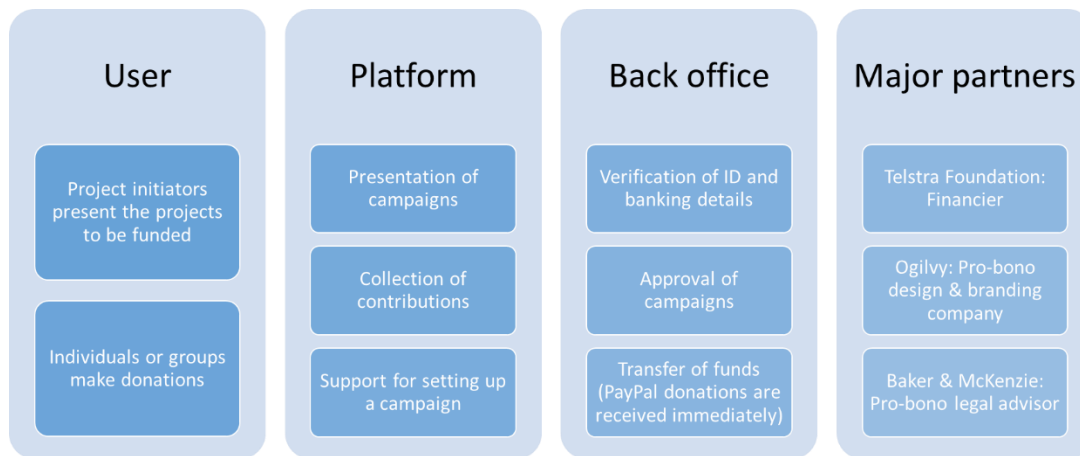


Figure 5. Screenshot 1 of chuffed.org website

Help local volunteers monitor reefs for the future

By Reef Check Foundation Ltd

\$250
Raised of \$15,000

Campaign Completed on 19-05-2014

Seas the day and support our volunteer reef surveyors!

Reef Check Foundation Ltd Brisbane, QLD, Australia

SELECT AN AMOUNT

\$5 \$25 \$50 \$100

Enter Other Amount

Donations Closed

OR CHOOSE A PERK

\$25 Bragging rights!
We will give you a social media shout out for your super contribution.
Est. Delivery Date: Within 24 hours
1 claimed
Unlimited left

\$50 Fish photo bomb!
For your kind donation, we will send you a virtual postcard via social media and a high resolution via email. Remember to include

2 Total shares


Share Tweet Follow Embed

Story Comments (0) Supporters (5)

It is more important than ever that we understand how our marine ecosystem deals with the threats over time. Reef Check Australia volunteers are preparing to dive in for another year of reef health surveys on the Great Barrier Reef, but we need your help to make it happen.

Our teams are part of a global network of volunteers who regularly monitor and report on reef health using standardised Reef Check citizen science protocols that allow us to compare reef health across the world. Reef Check is one of the only projects that offers locally and globally relevant data sets about reef health through the power of volunteers.


Figure 6. Screenshot 2 of chuffed.org website



Supercharge the Adani Carmichael Federal Court challenge!

26 Days left

By Environmental Defenders Office Qld



\$24,549 *
Raised of \$50,000

Help us supercharge the case before the Federal Court!

Environmental Defenders Office Qld Brisbane, QLD, Australia

SELECT AN AMOUNT

Donate \$50 AUD

456
Total shares

Story Comments (3) Supporters (192)

Have you heard the news? You have a wonderful opportunity to make a difference.

EDO Qld lawyers recently filed a Federal Court challenge to Environment Minister Greg Hunt's re-approval of the Adani Carmichael coal mine.

You may have seen our Principal Solicitor Sean Ryan in the news alongside Geoff Cousins, President of our client the Australian Conservation Foundation.

Why have we filed the case? Because like you, and millions of other Australians, we care deeply about protecting the magnificent Great Barrier Reef. We also care about the little guys, like the Black-throated Finch who might face extinction if this project goes ahead.

Australia has an international legal obligation to do all it can to protect our Great Barrier Reef for future generations. Our question is, has the Environment Minister properly applied this legal obligation when considering the impacts of the burning of coal from this mine on the Reef?

Please donate now to supercharge the case! We urgently need to raise \$50,000 to ensure we can bring the best possible case for ACF, the Reef and the Black-throated Finch.

Your donation will be used to fund this landmark case and if we're lucky any leftovers will support our other cases like the group of farmers and locals opposing the New Acland Stage 3 coal mine expansion, due to impacts on groundwater, farming businesses and community health.

We are a leading environmental public interest legal centre, but we can't win without your support!

In the lead up to Paris climate talks, I urge you to please show your support and make a tax-deductible donation to EDO Qld today.

Yours sincerely,

Jo-Anne Bragg
CEO/Solicitor
Environmental Defenders Office (Qld) Inc

This campaign started at 08:08 PM, 9th November 2015 EST and will end at 08:08 PM, 31st January 2016 EST

* \$9,630 in offline donations included in total.

4. Service brokerage platforms

Concept

Service brokerage platforms assist with aggregating, securing, integrating and simplifying the consumption of services by the technical implementation of integration (middleware) software. For example, Airbnb is a website and a mobile app for people to list, find, and rent lodging. Airbnb runs on a marketplace platform model where it connects hosts and travellers and enables transactions without owning any rooms itself.

Supply and demand

Users are categorised as "Hosts" and "Guests", both of whom must register with Airbnb using a variety of means. A valid email address and valid telephone were initially the only requirements to build a user profile on the website, however as of 2013, a scan of an official ID is required. Reviews of earlier visits and social media profiles are also used to build an online reputation and trust among hosts and guests.

In addition to providing personal information, hosts display detailed information about their property and the neighbourhood.

Pricing is determined by the hosts and they have 100% control over who books their place. When a potential guest puts in a reservation request, the host has at least 24 hours to accept or decline the request.

After the host accepts a reservation, he/she can coordinate meeting times and contact information with guests. After the check-out, both parties are encouraged to leave a review. Reviews help build validity and references both for the guests and the host.

Role of the platform

Airbnb facilitates the listing and search of hosts with the help of filtering functions (location, time, type and cost range of accommodation).

Airbnb facilitates online payments from guest to host through its Security Payments feature which processes payment transactions 24 hours after check in. This protocol offers a guarantee for guests and helps to uphold host cancellations policies before processing payments. Additionally, the Airbnb website facilitates security deposits and cleaning fees, the former of which is held until the property is vacated. The company's revenue comes from a 6% to 12% commission of the guest payment and 3% of what the host receives.

Additional services of the platform include

- Wish List: In 2012, Airbnb launched a wish list feature offering users the ability to organise their favourite destinations into organised lists and share these with other users. The idea was to change the website from an online marketplace to a source for inspiration. 45% of users engage with Wish Lists.

In creating Wish Lists, the company designed a proprietary "info scrolling system" which allows users to engage with these lists without the website slowing down the user experience. Additionally, Airbnb open sourced the code, Infinity.js to the software developer community.

- Neighbourhoods: In 2012, Airbnb launched the Neighbourhoods product for selected megacities. This travel guide helps travellers choose to the ideal neighbourhood match based on a series of collaborative filters and attributes such as Great Transit, Dining, Peace & Quiet, Nightlife, Touristy, and Shopping.

Figure 7. Simplified service concept of Airbnb.com

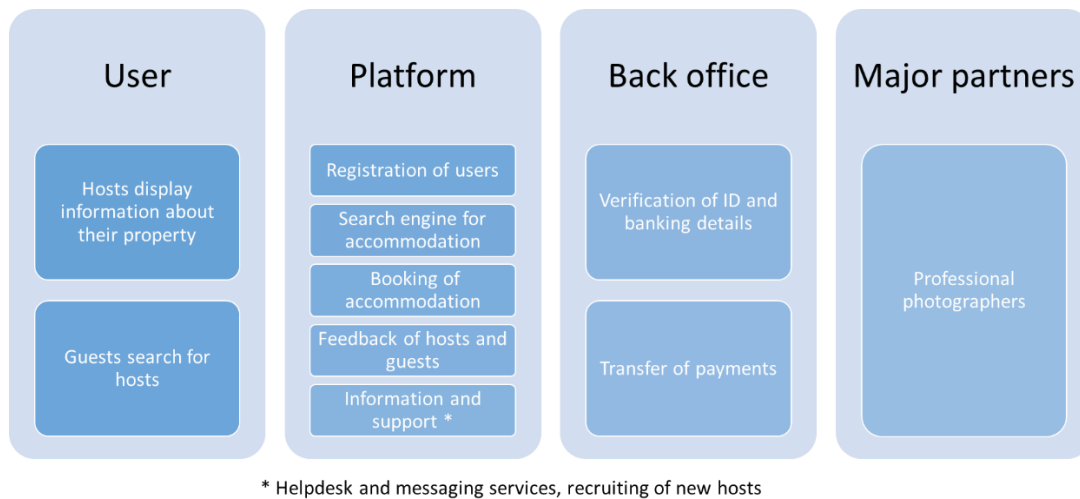
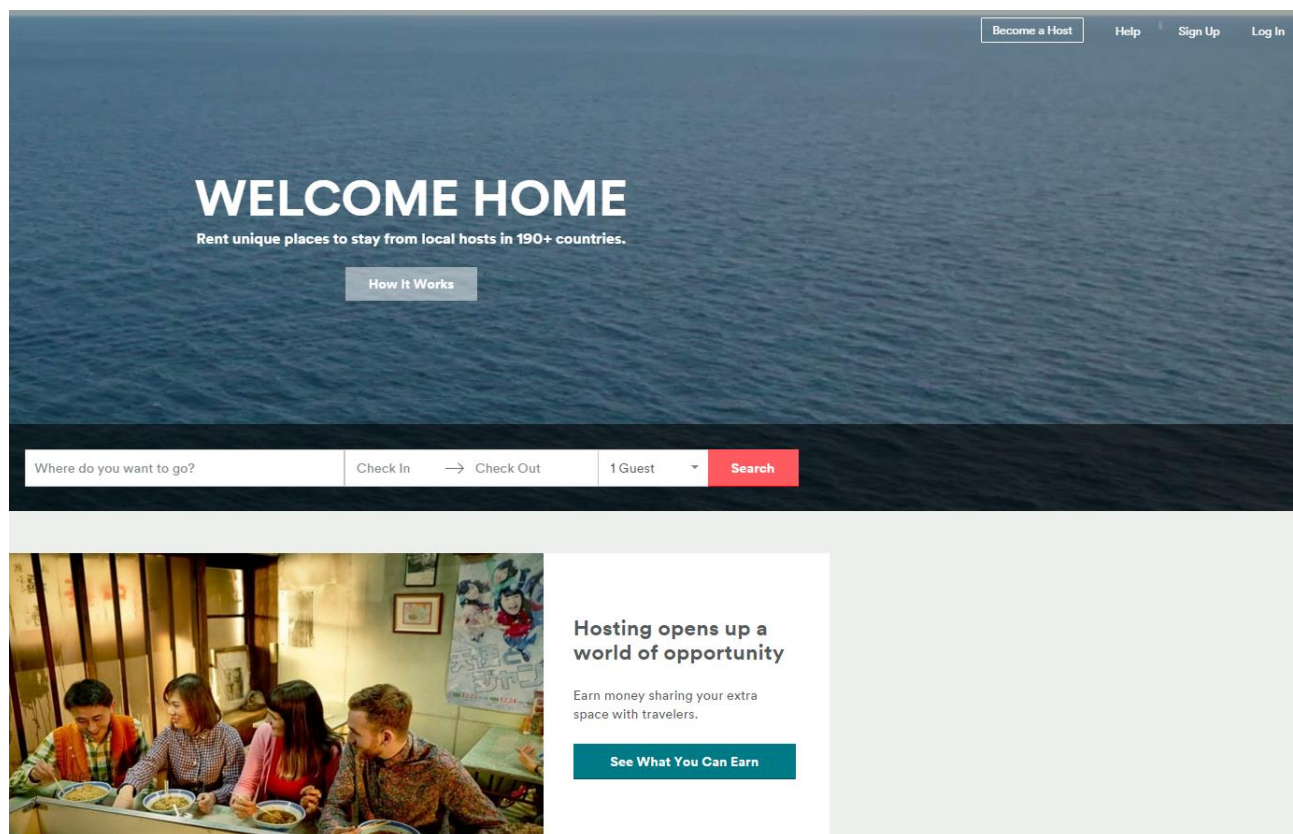


Figure 8. Screenshot of Airbnb.com website



5. Voluntary carbon offsetting platforms

Concept

Carbon offsetting companies offer voluntary reductions in greenhouse gas (GHG) emissions in compensation of emissions such as car or airplane travel, home energy use or organisation of events. Carbon offsetting is considered a low-cost way to compensate for emissions by paying others to undertake activities that avoid, reduce, or sequester GHG emissions.

Supply and demand

Offsets are typically achieved through financial support of projects that reduce GHG emissions. The most common project type is renewable energy (e.g. wind farms, biomass energy, or hydropower). Others include energy efficiency, methane abatement and forestry projects. Offsets are marketed to companies and individuals. Their participation is motivated by goodwill, image in the eyes of the general public and investors, and in some cases, anticipation of regulation. Voluntary offsetting is particularly common in the financial sector.

Role of the platform

The sales of carbon offsets need to tackle the challenges related to the carbon market:

- measuring emission reductions or carbon sequestration relative to a projected business-as-usual scenario, in a wide range of activities
- limited transparency as many transactions do not involve a central trading platform, exchange, or registry system.

Credibility can be improved by the use of standard quality assurance mechanisms. Various standards have been developed for the voluntary offset market, including the Voluntary Gold Standard (VGS), the Voluntary Carbon Standard (VCS), the VER+ Standard and the Quality Assurance Standard (QAS) of UK. They address issues such as

- Baseline and Measurement—What emissions would occur in the absence of a proposed project? And how are the emissions that occur after the project is performed going to be measured?
- Additionality—Would the project occur anyway without the investment raised by selling carbon offset credits?
- Permanence—Are some benefits of the reductions reversible?
- Leakage—Does implementing the project cause higher emissions outside the project boundary?

Platforms bring together suppliers of different types of offsets (e.g. companies, nonprofits, social enterprises, governments, NGOs) and consumers (predominantly businesses) who purchase offsets of domestic or international origin. Platforms are also closely linked to developers of quality assurance mechanisms and third party verifiers.

Many platforms enable consumers and businesses to calculate their carbon footprint, most commonly through a web-based interface, and sell them offsets in the amount of that footprint. Some carbon-intensive companies such as airline companies, also offer offsetting services with their own transactions.

As an example of a voluntary offsetting, Natural Capital Partners is presented. The company works with over 350 businesses in over 35 countries. Trading does not take place at the platform, but the developers of carbon offset projects are invited to contact the carbon sourcing team and the buyers of carbon offsets the sales team.

Figure 9. Simplified service concept of Natural Capital Partners

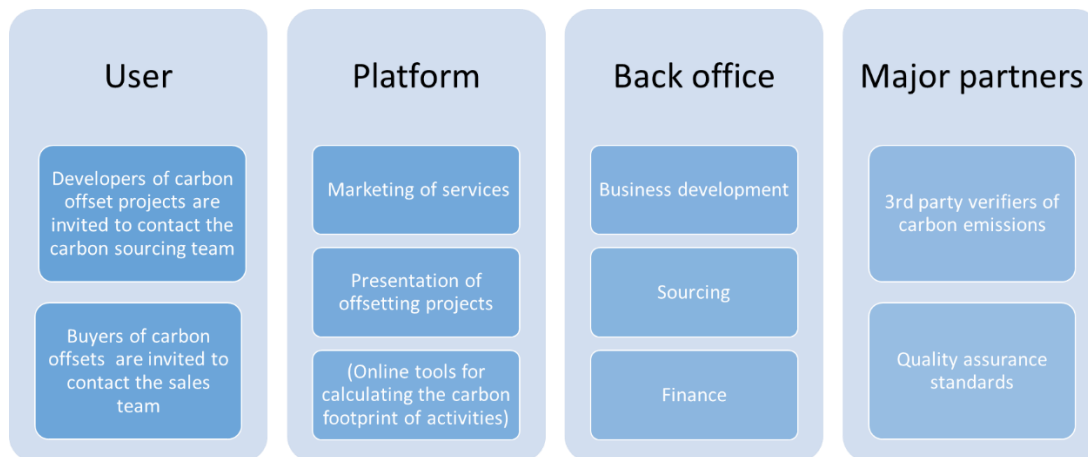
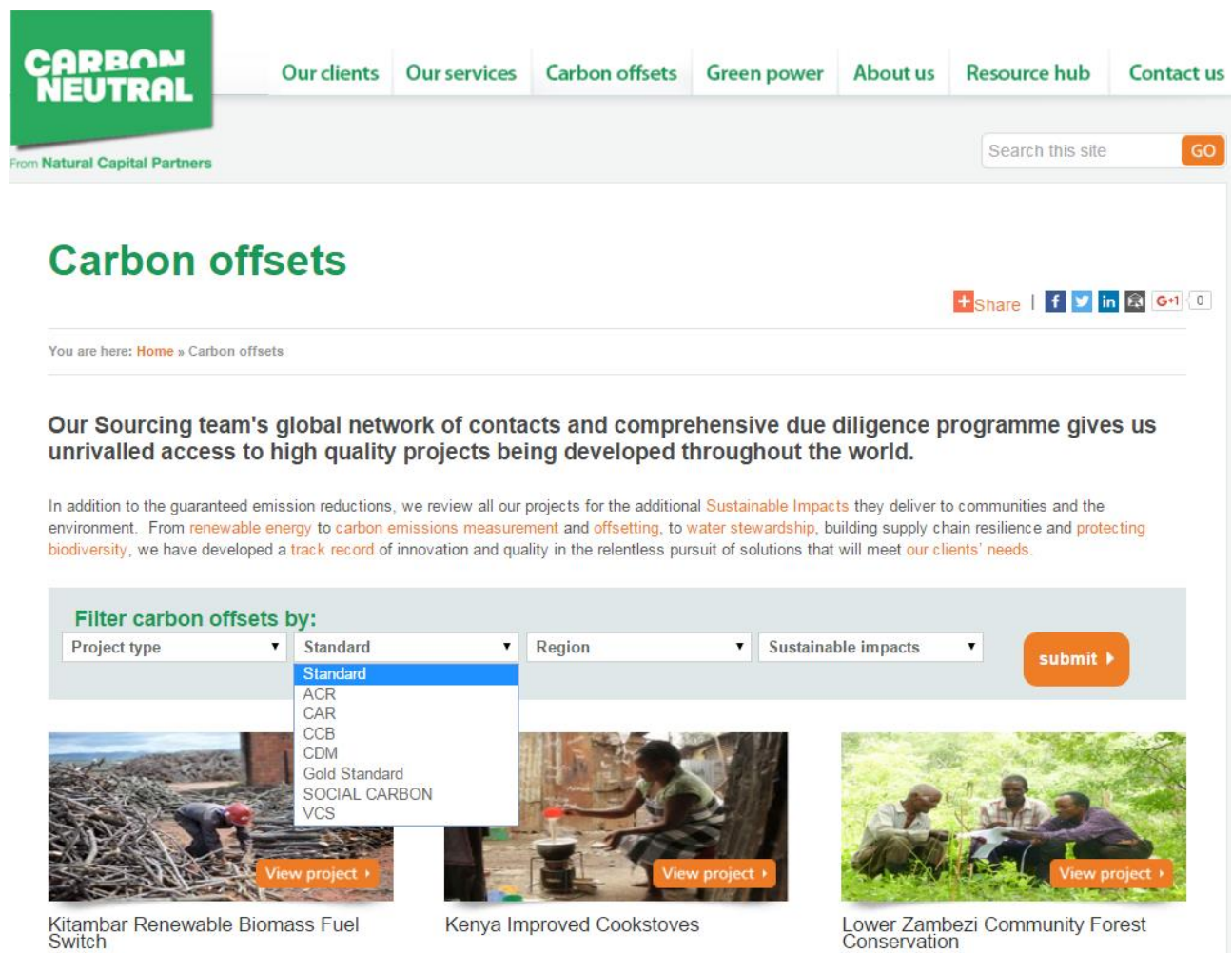


Figure 10. Screenshot of Natural Capital Partners website



6. Water quality trading

Concept

Water quality trading (WQT) refers to the application of emissions trading to water pollution control. Emissions trading is a market-based pollution control instrument that - while setting a cap on the total emissions - promotes cost-efficiency in emissions reductions by allowing market transactions between individual pollution sources.

WQT initiatives have been implemented in Australia, Canada, New Zealand, and the US:

- Australian trading programmes for industrial sources include e.g. The Hunter River Salinity Trading Scheme of New South Wales. A pilot was initiated in 1995 and a fully operational scheme in 2002. Non-point sources are included in the quite recent (2014) nutrient management mechanism developed for the Moreton Bay of Queensland.
- Canadian Ontario South Nation River Total Phosphorus Management Program, initiated in 2000, involves phosphorus trading between industrial and municipal point sources and agricultural nonpoint sources.
- Lake Taupo Nitrogen Trading Program of New Zealand, initiated in 2010, is focused on nitrogen trading between agricultural sources.
- In the US, there are water quality trading initiatives in 22 instances located in 14 states. Experiments began in the 1980s, and major running schemes include Great Miami River Watershed Water Quality Credit Trading Pilot Program of Ohio, and Pennsylvania Nutrient Credit Trading Program around the Chesapeake Bay.

Supply and demand

Emissions trading is implemented through the trading of emission reduction credits (ERCs) or emissions allowances (permits) in a cap-and-trade (CAT) programme. CAT programmes entail explicit caps on aggregate emissions whereas ERC programmes do not: E.g. New Zealand's Lake Taupo programme and the former Grassland Farmers selenium trading programme of the US are cap-and-trade programmes, but the Canadian and US nutrient WQT programs are only partially capped, allowing trading between point sources that are subject to explicit regulatory limits and agricultural sources that are not. In order to eliminate the emergence of potential issues, agricultural offsets are often treated differently from point source pollution in trading rules: E.g. the Ontario South Nation River programme requires a reduction of 4 kg of phosphorus from an agricultural source for each kg of point source phosphorus emissions allowed.

In the US, early initiatives were disappointing, producing little or no trading activity. The initiators of trading have been state water quality managers together with the US Environmental Protection Agency, which has created national policy guidelines for WQT in 2003 and given technical assistance (legal compliance, guidelines for the creation of trading models) and funding for WQT projects. Lessons learned from early initiatives include:

- Binding regulatory limits on pollution levels are essential for trading activity to occur. Such limits are essential to create the incentives for polluters to seek out options for pollution control cost savings.
- Trading activity requires sufficiently large differences in pollution control costs between polluters to make economic gains from trading, after deducting transactions costs incurred in conducting trades.
- Trading rules must be clearly established to assure that water quality goals will be satisfied, but must also be designed to facilitate trading. Rules that are overly complex and costly create barriers to trading activity.
- Successful trading requires the development of institutions for organising trade that are trusted by and effective for intended programme participants.

Role of the platform

According to OECD (2012), emissions trading can take the form of

- Exchanges: Exchange markets are exemplified by stock and commodity exchanges where buyers and sellers meet in a public forum to set prices and execute trades. Exchange markets are well suited to trading highly standardised commodities in thick markets. They have been used for some major CAT air emissions markets, but are generally not well-suited to water quality trading due to difficulties in standardising water pollutants as a tradable commodity.

- Bilateral negotiations: Bilateral negotiations are common when buyers face a diversity of sellers and the characteristics of the goods are variable. This method, sometimes executed through brokers, is common in existing WQT markets.
- Clearinghouses: Clearinghouses create a market intermediary that buys allowances or ERCs from sellers, and sells allowances or ERCs to buyers. Clearinghouses differ from brokers in a bilateral market in that clearinghouses eliminate all contractual or regulatory links between sellers and buyers so that parties interact only with the intermediary. Clearinghouses are also common in WQT programs.

The main characteristics of selected schemes are presented in

Table 1. Apart from designed as bilateral negotiations or clearinghouses, the main differences between schemes are related to

- Pollutants involved: Most schemes focus on nutrients (nitrogen and/or phosphorus), but some involve other pollutants including metals, selenium, temperature, and water flow.
- Acceptance of and trading ratios for non-point sources¹.
- Market orientation: The existing schemes provide varying opportunities for market-like participation.

¹ In the U.S., Best Management Practices (BMPs) that generate ERCs include

- soil erosion controls,
- cattle exclusion,
- rotational grazing,
- critical area set-asides,
- constructed wetlands, and
- cover cropping

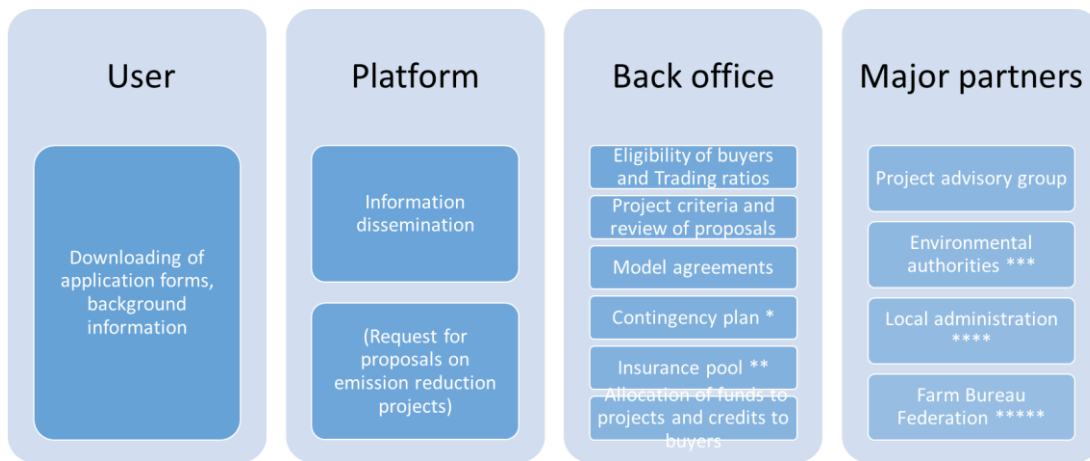
Table 1. Examples of Water Quality Trading Programmes (OECD 2012, State of Queensland 2014)

	Australia	Canada	New Zealand	USA
Programme	Nutrient management mechanism (Moreton Bay, Queensland)	Ontario South Nation River Total Phosphorus Management Program	Lake Taupo Nitrogen Trading Program	Greater Miami River Watershed Trading Pilot
Administrator	Department of Environment and Heritage Protection	South Nation Conservancy (SNC)	Environment Waikato	Miami Conservancy District (MCD)
Year initiated	2014	2000	2010	2005
Pollutant	Phosphorus, Nitrogen	Phosphorus	Nitrogen	Phosphorus, Nitrogen
Eligible pollution sources	Industrial, municipal, agricultural, urban or other diffuse sources	Industrial, municipal, agricultural	Agricultural	Industrial, municipal, agricultural
Commodity type	Emissions reduction credits (ERCs)	Emissions reduction credits (ERCs)	Emissions allowances	Emissions reduction credits (ERCs)
Emissions quantification	Calculated	Calculated	Calculated	Calculated
Agricultural sources capped?	No	No	Yes. Unlike the partially capped programmes of North America, NZ landowners receive nitrogen allowances based on historical land uses	No
Trade ratio* for nonpoint sources	A ratio of 1.5:1 will be applied to ensure that a nutrient reduction action at one point, corresponding with discharges at another point source, generates a water quality improvement.			Trade ratios of between 1:1 and 3:1 are established to incentivize early, voluntary participation by point sources and to recognize the water quality attainment status of the receiving water body into which the buyer discharges.

Market organisation	Not functional yet. A delivery ratio will adjust for the environmental impact of a pollutant discharge being moved from one part of a catchment to another.	SNC sells ERCs to point sources. Proceeds are used to fund agricultural projects. Farmers do not participate directly.	The market is designed for voluntary exchange between landowners or third party agents. An online registry has been developed for posting offers.	MCD acts as a clearinghouse. It buys ERCs from Soil and Water Conservation Districts (SWCDs) using reverse auctions. The SWCDs use the proceeds to fund agricultural projects. Farmers do not participate directly. The program is funded by ERCs sold to municipal waste water treatment plants and by federal grants .
Baseline participation requirements or initial allowances	Actions need to generate additional improvements to what is already required and they would not otherwise have taken place.	None. Farmers do not participate directly. Eligible projects are funded by SNC.	Initial allowance allocation is based on the average nitrogen losses between 2000 and 2005.	Credits generated by agricultural projects funded by the program cannot be funded by other programs or otherwise required.
Contractual period	max 20 years			1-20 years

* In point-nonpoint trading schemes, trade ratios define the number of ERCs that must be acquired to offset a unit of regulated emissions.

Figure 11. Simplified service concept of Greater Miami River Watershed Trading Pilot



* A contingency plan defines response in case of failure in management practice (=emission reduction)

** Credits may be withdrawn from the pool, if necessary, to replace credits that are lost due to a failed management practice. Credits may be sold to generate funds for projects that would yield additional pollutant reductions. Credits may be sold to generate funds to cover Trading Program costs.

*** Linkages with environmental permit system, Load Reduction Spreadsheets determining the number of credits generated

**** Identification and implementation of management practices

***** Training for farmers

Figure 12. Screenshot of Greater Miami River Watershed Trading Pilot website

MCD
MIAMI CONSERVANCY DISTRICT

PROTECTING. PRESERVING. PROMOTING.

Home Flood Protection **Preserve Our Water** Recreation About MCD Resources & Publications Contact Us

PRESERVE OUR WATER

Water in the Great Miami River Watershed
Groundwater Programs
▶ **Surface Water Programs**
Water Quality Credit Trading
Stormwater
Green Infrastructure
Water Quality Improvement
Stream Team
Water Data
Citizen Involvement
On the Water Front
Value of Water
Glossary

SURFACE WATER PROGRAMS
Great Miami River Watershed Water Quality Credit Trading Program

The Great Miami River Watershed Water Quality Credit Trading program provides funds for reducing pollutant runoff into rivers and streams. This new program could save communities more than \$300 million over the next 20 years while significantly improving water quality.

Soil and water conservation district (SWCD) staff – working with local farmers who agree to voluntarily change their farming practices – will submit projects that reduce phosphorus and nitrogen runoff. These pollutants come from fertilizer and manure and can run off the land into our rivers and streams.

The projects will generate "credits" that wastewater treatment plants can use to meet regulatory requirements.

About 40 percent of Ohio's rivers and streams do not meet state guidelines for fishing and swimming and other designated uses. As a result, new regulations will require wastewater treatment plants to reduce even more pollutants at the plant.

The plants have made great strides in reducing pollutants, and even a slight percent reduction can cost millions of additional dollars. On the other hand, an agricultural project upstream of the plant can generate a far greater reduction at a significantly lower cost – saving the plant and its customers money.

Projects will be reviewed and selected by an advisory committee – not MCD – whose members represent wastewater treatment plants, agricultural producers, Ohio Farm Bureau Federation, Ohio Water Environment Association, community-based watershed organizations, county soil and water conservation districts, ODNR and the USDA.

In partnership with:
County Soil and Water Conservation Districts
Ohio Farm Bureau Federation Inc.
ODNR - Division of Soil and Water Conservation
OEPA - Division of Surface Water
USDA Natural Resources Conservation Service
Cities of Dayton, Englewood, and Union
Butler County Department of Environmental Services
Tri-Cities North Regional Wastewater Authority

For more information please contact Sarah Hippensteel at 937-223-1278 ext. 3244 or shippensteel@miamiconservancy.org

Search:

2014 Trading program fact sheet (433 KB)

Trading Program reports, articles, research papers

Interactive Water Quality Credit Trading Map

Trading Program Application (Word Document 109KB)

Load Reduction Spreadsheet

Trading Program Operations Manual (1MB)

Trading Program Evaluation Study

Executive Summary of the Preliminary Economic Analysis (2.15MB)

Annual Project Inspection Form (15 KB)

Completion of Project Installation Form (15 KB)

Water Quality Study of Nitrogen and Phosphorus 2005 – 2011

Quality Assurance Project Plan

7. Conclusions

Table 2 below summarises the service concepts of various platforms in terms of their client segment, key activities, resources, and partners. When reflected to the development of the NutriTrade platform, it can be concluded that

- The success of the **online charity** DiveDirectly is based on an innovative delivery mechanism for contributions: transferring them to mobile phones ensures the quick arrival of money to beneficiaries and reduces the risk for corruption. The organisation has gained a good reputation by paying a lot of attention to the credibility and transparency of their selection, verification and follow-up processes, which could be a valuable lesson to NutriTrade, too.

- **Crowdfunding** platforms are based on the idea of diversity – all kinds of project developers are encouraged to market their ideas and it is up to the voluntary financiers to decide the destination and level of their support. The main questions for NutriTrade are whether it is wise to settle for minimal preconditions for eligible projects and to openly compete with other types of projects. Are the reputational risks too large? Would it be feasible to market nutrient offsets among carbon and biodiversity offsets, or even together with all kinds of environmental and social projects?

- The concept for **service brokerage** at Airbnb.com seems to be the most distant from NutriTrade point of view. The use of seller and buyer recommendations as a verification method would hardly prove successful in emission reduction projects. However, NutriTrade could learn from the matchmaking process where the buyers can search for objects that fulfil their personal decision making criteria. Moreover, the company has cleverly invested in providing consumers with wow-experiences (professional photographers assist the sellers to present their offerings).

- **Carbon offsetting** can be considered very similar to nutrient offsetting. The service concept is strongly based on quality standards for projects and a third party assessment of their fulfilment. Moreover, some service providers offer carbon footprint calculation tools. The consequences for NutriTrade are to be aware of existing verification methods and to consider which kind of quality assurance mechanisms are needed to define eligible projects. For market transparency reasons, however, the number of standards should not be too high. Nutrient neutrality services by water utilities or service companies could be an interesting option, too.

In carbon trading, simplified procedures have been applied for small projects to ease the bureaucracy in project development and verification. E.g. the project idea notes of GHG emission reduction projects could serve as a format for presenting projects in nutrient emission reduction projects, too.

- **Water quality trading** is often based on compliance schemes, not voluntary offsetting. Existing schemes have, however, developed methods for dealing with water-specific issues such as dealing with differences in the measurement accuracy of point and non-point source emissions and in the geographical location of emissions.

Interestingly, the demands for verification are a major differentiating factor between the platforms. They seem to be considerably tighter for platforms targeting businesses and institutional organisations than for consumer-focused platforms as the latter may settle for self-declarations or peer reviews instead of quality standards or 3rd party certification of projects.

Table 2. Comparison of service concepts

	GiveDirectly	chuffed	Airbnb.com	Natural Capital Partners	Greater Miami River Watershed Trading Pilot
Type	Online charity Voluntary	Crowdfunding Voluntary	Service brokerage Voluntary	Carbon offsetting Voluntary	Water quality trading Compliance
Client segment	Consumer and business	Consumer	Consumer	Business	Public and private utilities
Key activities	Marketing to donors, Collection and transfer of contributions	Marketing to donors and project developers, Presentation of campaigns, Collection and transfer of contributions	Matchmaking between service providers and users, Transfer of payments	Marketing of carbon offsets and CarbonNeutral® certification	Promotion of cost-efficiency in pollution control. Different roles for the platform (clearinghouse, broker, ...)
Key resources	Technology for mobile money transfers, (Methodologies for the screening of beneficiaries & verification of activities)	- (Mechanisms for campaign initiation & verification)	Integration software, A quality assurance mechanism based on references	Quality assurance mechanisms based on various standards, The Carbon Neutral Protocol (Carbon footprint calculation tools)	Technical guidance (Load reduction spreadsheet, Trading rules, etc.)
Key partners	Mobile money providers, Payment securers, Institutional donors	Payment securers	Payment securers	Third party verifiers, Developers of quality assurance mechanisms	Environmental and local authorities
Success	GiveDirectly is rated as a top charity by an independent evaluator	Popular in creative industries, less so in environmental projects	Fast-growing	An established market. Market non-transparency is considered a problem	Less activity than expected

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