EVALUATING BEHAVIOUR CHANGE INTERVENTIONS:
A CASE STUDY IN VIET NAM

Alegría Olmedo

September 2015

A thesis submitted for the partial fulfilment of the requirements for the degree of
Master of Science at Imperial College London

Submitted for the MSc in Conservation Science

Declaration of Own Work

I declare that this thesis, "Evaluating Behaviour Change Interventions: A Case Study in Viet Nam"
is entirely my own work, and that where material could be construed as the work of others, it is
fully cited and referenced, and/or with appropriate acknowledgement given.

Signature   _____

Name of Student   Alegría Olmedo

Name of Supervisors   Dr. EJ Milner-Gulland
                                                   Vian Sharif

Contents

List of Figures

List of Tables

List of Acronyms

DEFRA	Department for Environment, Food and Rural Affairs
TM	Traditional Medicine
VTM	Vietnamese Traditional Medicine
TCM	Traditional Chinese Medicine
BPM	Behavioural Perspective Model
BCA	Biodiversity Conservation Agency
CITES M.A.	Convention on International Trade in Endangered Species of Wild Fauna and Flora Management Authority
HSI	Humane Society International
HCMC	Ho Chi Minh City
ENV	Education for Nature - Vietnam
WWF	World Wide Fund for Nature
WCS	Wildlife Conservation Society
PSA	Public Service Announcement
PSI	Population Services International
TKLM	TKL Media
TRA	Theory of Reasoned Action
MONROE	Ministry of Natural Resources and Environment

Abstract

Illegal wildlife trade has been recognised as a severe threat to biodiversity and a top international priority. Conservation practitioners and world leaders have agreed that focusing on controlling the supply of these products must be combined with addressing the demand from consumers at end-markets. Behaviour change interventions have been launched in countries such as Viet Nam in attempts to reduce demand for wildlife products. Using an original method combining social marketing and behaviour change theory, following the grounded theory approach, interventions in Viet Nam have been evaluated. From this study, it was found that very few have included the basic theory to understand the behaviour in question and/or the audience performing this behaviour. Messages have been designed based on assumptions instead of reliable evidence of success. As a result, audiences have been exposed to ineffective messages at the expense of limited resources and funding, and evaluation of these projects has not been considered a priority. This study presents lessons and theory that can be applied when designing future behaviour change interventions to maximise success of consumer behaviour change campaigns within conservation.

Word Count: 17,039

Acknowledgements

I would like to thank my internal supervisor, EJ Milner-Gulland for her support, assistance and guidance, not only during this thesis but throughout the whole year. Thank you to Vian Sharif for her enthusiasm and encouragement.

Thank you to all the practitioners from the organisations and government agency who dedicated time to share information with me and for being so helpful. I hope this thesis can be useful to you.

Lastly, I would like to thank my parents, family and friends for their immense support, counsel, and heart-felt motivation.

Chapter 1 - Introduction

Problem Statement

In the last two Conferences on the Illegal Wildlife Trade (London 2014, Kasane 2015), illegal trade in wild species has been identified as a top international priority. Since it is linked with organised international crime networks which are also involved in arms, drugs and human trafficking (Drury, 2009), it is recognised as a grave threat to the survival of many species as well as an issue of national and international security (Declaration, 2014). In order to address the illegal trade in wild species, the Kasane Conference on the Illegal Wildlife Trade in March 2015, reviewed the progress made since the London Conference and listed as its first future action to: "Eradicate the market for illegal wildlife products" (Declaration, 2015). In response to this, conservation organisations and governments have focused on developing programmes with education, law enforcement and behaviour change components. For example, the Department of Environment, Food and Rural Affairs (DEFRA) from the United Kingdom has undertaken a research project to support demand reduction projects for illegal wildlife products in end-markets (Appendix 1).

Focusing on the end-markets of illegal wildlife products is essential to curb the poaching crisis currently threatening biodiversity across the globe (Felbab-Brown, 2011; Underwood *et al.*, 2013; Gao & Clark, 2014). Since this requires proper engagement with human behaviour and attitudes, it can benefit from the best practices of marketing and knowledge and expertise in social sciences (Verissimo *et al.*, 2013; Duthie, 2014). So far, even when conservation projects are designed to influence individuals, societies or governments, the impact is usually measured in terms of species or ecosystems, not within the human component (Margolouis *et al.*, 2009). Social marketing and behaviour change approaches particularly, can provide tools to understand how to influence human behaviour (Jones *et al.*, 2005).

The majority and best documented existing behaviour change campaigns have been conducted in Viet Nam; this country provides a useful scenario to study the current use of conservation marketing that seeks to achieve behaviour change.

Viet Nam Case Study

Viet Nam has been an exporter and consumer of wildlife for centuries (Nash, 1997), and with the economic development this country has seen in the last few decades, demand for wildlife products has seen a significant increase (Nijman, 2009; Campbell, 2013; Challander & MacMillan, 2014). Viet Nam, similar to other countries in East Asia, has long played a role as an exporter, consumer and transit country of legal and illegal wildlife products. However, the tide turned in 2008 when an increase in rhino poaching threatened mainly South Africa (Milliken, 2014; Department of Environmental Affairs, 2015) and the international community turned to Viet Nam, which at the time was identified as the world's main rhino horn consumer. Involvement of Vietnamese citizens in rhino horn seizures, including Vietnamese diplomats

implicated in certain instances (EIA, 2013), supported the claim that demand in Viet Nam was the main catalyst of the increase in rhino poaching (TRAFFIC, 2013a, 2013b).

In response, Viet Nam signed a Memorandum of Understanding with South Africa, committing to address this problem (MoU, 2012). The focus turned to Viet Nam to increase both enforcement efforts, and demand for rhino horn; as a result, a sense of urgency fuelled an almost immediate launch of conservation campaigns. These have created a very interesting arena to conduct research of behaviour change interventions; from which, good practices, failures and lessons learned can be used to develop a framework to guide effective behaviour change projects in the future.

Much work is still needed in Viet Nam, not only for rhino horn but for elephant ivory, pangolin, tiger, and many other wildlife derivatives. An essential next step is to analyse whether these existing practices have been effective or not. The need to develop effective campaigns to curb demand, and therefore poaching of wild species, can no longer drive practitioners into action with a severe lack of evidence and research.

Study Aims

This study aims to assess the interventions that have been launched in Viet Nam to address the consumption of rhino horn and elephant ivory in order to develop a framework that can guide behaviour change initiatives in the future. Assessment of the existing projects includes looking into prior consumer research studies, assumptions that have influenced these campaigns, steps followed in the design of the interventions and analysing how these efforts have been evaluated.

The main outcome of this study is to provide organisations and practitioners with guidelines that can help design future behaviour change interventions, taking into consideration lessons learned from on-going projects in order to maximise the chances of achieving effective demand reduction of wildlife products.

Study Objectives

1. Collate information regarding already launched conservation interventions with behaviour change goals in Viet Nam, for rhino horn and elephant ivory consumption.
2. Understand the planning and research that developed these interventions.
3. Determine how these programs were designed, monitored and evaluated.
4. Identify examples of good practices and lessons learned from the Viet Nam case study.
5. Determine a framework of elements to include in behaviour change interventions, including how research and evaluation can be carried out in the future.

Chapter 2 - Background

2.1 Illegal Wildlife Trade

Wildlife trade is the sale or exchange of products from wild species and/or their derivatives (Roe *et al.*, 2002). East Asia is one of the largest markets for illegal wildlife products (Nijman, 2009; Campbell, 2013). For centuries, East Asia has been a hotspot for wildlife trade both for local and international species. Countries such as China, Thailand, Viet Nam, Cambodia, Myanmar and Laos have been playing an important role not only in the export of illegal wildlife products, but in their consumption as well. The scale and full impact of the illegal trade is uncertain but detrimental outcomes are increasingly evident as has been demonstrated by the eradication of wildlife in Asia at a greater pace than that of habitat degradation (Drury, 2009). Economic development in the region has enabled a greater part of the population to acquire luxury goods, increasing the demand for wild animals (Drury, 2009; Nijman, 2009).

2.2 Demand for illegal wildlife products

The economic term, demand, refers to the market for a specific product with regards to the number of potential customers and their readiness and capacity to purchase the product (UNDCP, 2000). Demand for wildlife products has long existed in Southeast Asia and in recent decades economic prosperity has enabled a larger proportion of the population to afford rare and expensive wildlife products (Nijman, 2009; Drury, 2009, 2011; Campbell, 2013); which increases the threat to biodiversity. As iconic species dwindle and certain products like elephant ivory, rhino horn, pangolin scales and tiger bone are perceived as more and more rare, demand and poaching of these species has seen a dramatic increase (Courchamp *et al.*, 2006; Hall, Milner-Gulland & Courchamp, 2008; Challander & MacMillan, 2014).

In order to address the increase in demand for these products, organisations and governments in Southeast Asia have begun developing efforts to stop this trend and reduce the demand. Demand reduction is a broad term used for policies and programmes that seek a reduction in the desire and readiness to obtain and use a certain product (UNDCP, 2000). The escalating menace to biodiversity that illegal wildlife trade poses has called for a focus on demand reduction interventions in the end-markets of the trade (Declaration 2014, 2015). Addressing the supply of illegal products has also been considered a priority, but focusing on this by itself concentrates on the symptoms and not the root of illegal wildlife trade (Drury, 2011; Felbab-Brown, 2011; Verissimo *et al.*, 2012; Underwood *et al.*, 2013; Gao & Clark, 2014).

Two of the species of highest critical concern due to wildlife trade are rhinos and elephants. These charismatic and worldwide known species have suffered due to a severe increase in poaching in both Africa and Asia over the last several years and demand in Southeast Asia and China has been identified as the driving cause (Milliken & Shaw, 2012). Viet Nam and

China specifically have been identified as the main consumers for rhino horn, while China and Thailand are known to be the main consumers for elephant ivory (Underwood *et al.*, 2013).

2.3 Viet Nam

Viet Nam has long been an exporter of wildlife; records show that up until the 10th century, Vietnamese kings paid tribute to Chinese leaders by sending them rare wildlife and wildlife products (Nash, 1997). While there have been no studies done in Viet Nam to identify the main consumers and/or reasons for consumption of elephant ivory, studies claim that the two main uses for consumption of rhino horn are, its use in traditional medicine and as a luxury product to enhance social status (Milliken & Shaw, 2012; HSI, 2014).

2.3.1 Traditional Vietnamese Medicine

Traditional medicine (TM) in Viet Nam has a history of 2000 years; it is believed to aid in both the prevention and cure of ailments and diseases and maintains the body's natural balances (Nguyen *et al.*, 2008; Woerdenbag *et al.*, 2012). Taking traditional medicine is therefore more of a lifestyle (Nguyen *et al.*, 2008; Drury, 2009; Woerdenbag *et al.*, 2012). This is in accordance with the religious and spiritual beliefs in Viet Nam: Buddhism, Confucianism and Taoism all outline the type of lifestyle one must follow to live a happy, balanced life (Nguyen, 2005). Tue Tinh, known as the founder of Vietnamese Traditional Medicine (VTM), was also a Buddhist monk and his approach to health maintenance reflected Buddhists principles: "preserve the essence, nourish the energy, protect the spirit, purify the heart, refrain from envy, favour right action, exercise the body" (Pharm & Bodeker, 2001). Similar to Traditional Chinese Medicine (TCM), VTM has a complete theory and philosophy concerning the human body. It does not separate man from nature and considers disease as an imbalance of yin and yang (cool and hot), which can be rebalanced by different natural tonics (Tyme, 2001; Woerdenbag *et al.*, 2012).

Culturally, traditional medicine is thought to be more reliable, efficient, has few or no side effects, and shows no evidence that viruses and bacterias can develop resistance to it, unlike Western medicine (Nguyen *et al.*, 2008; Woerdenbag *et al.*, 2012). Furthermore, Western medicine is believed to treat symptoms instead of addressing the deeper problem so although it provides a temporary fix, there is no durable outcome and it could lead to other disorders. According to VTM, Western medicine is toxic or 'hot' and perceived as modern and scientific but potentially addictive, expensive and fake (Drury, 2009). For this reason, VTM is preferred for long-term treatment of chronic diseases, particularly among older people, and is sometimes used in addition to Western medicine to alleviate some of its harmful side effects (Woerdenbag *et al.*, 2012).

During Chinese rule, VTM was influenced by TCM but it also developed its own characteristics and even influenced TCM (Bates & Bates, 2007). When Viet Nam was a French colony (1858 - 1954), traditional medicine was discouraged and not included in the formal health system, but it was not abandoned. After independence was gained there was a resurgence of

4

traditional medicine (Nguyen *et al.,* 2008; Woerdenbag *et al.*, 2012). This was in part because of a scarcity of Western medicine but also emphasised national identity (Bates & Bates, 2007). During the Vietnamese-American war (1965 - 1975), VTM contributed to heal war injuries and since then its revival has remained strong (Woerdenbag *et al.*, 2012).

Currently, VTM is a dominant form of health maintenance and disease prevention, it is fully integrated in the culture and holds an important role in society and in Vietnamese daily life. The importance of traditional medicine in Vietnamese culture is significant to illegal wildlife trade and biodiversity loss because many endangered species are prescribed as remedies and tonics in VTM. Far more plant species than animal are used in traditional medicine (Nguyen *et al.,* 2008; Woerdenbag *et al.*, 2012); a study carried out by TRAFFIC (2005) identified 406 medicinally used animal species in the literature (Nguyen *et al.,* 2008). Animals used in VTM are supplied from the wild, imported from other countries or captive bred. Wild animal species and their products enjoy popularity in many Asian countries, including Viet Nam, because they are believed to have a high medicinal value and considered very potent (Drury, 2009; Woerdenbag *et al.*, 2012). As wild populations disappear in Viet Nam, imports from neighbouring countries such as Laos, Cambodia, Myanmar and Indonesia are becoming important supply sources (Nguyen *et al.,* 2008).

Among other products such as bear bile, pangolin scales and tiger bone glue, both rhino horn and elephant ivory were listed in the Dictionary of Vietnamese Pharmaceutical Products. Rhino products are rare and expensive ingredients in traditional medicine; powdered rhino horn specifically is prescribed to treat heart and liver ailments, reduce fevers, treat headaches and ulcers, improve blood circulation and prevent internal haemorrhage. Powdered Asian elephant ivory, is recommended to treat haemorrhages, accelerate scar tissue formation, reduce fevers, nervousness and skin inflammation (Nash, 1997). Whether there is evidence for these two remedies or not, the fact that both species have been part of the medicinal literature, essential to Vietnamese culture, history and life, shows that consuming these products is not a new trend at all. Furthermore, it presents a threat to products listed in these medicinal texts, specially those that come from endangered species. As species become more rare in the wild, their value increases and so does the demand for them (Courchamp *et al.,* 2006; Hall, Milner-Gulland & Courchamp, 2008).

Within Vietnamese society, consuming wild animal-derived medicines is not associated with high status, income or prestige. The only factor positively related to the use of wild animal-derived medicines found was age, since traditional medicine is believed to be effective in treating chronic diseases and has strengthening and restorative properties (Drury, 2011). This speaks to a very important factor of Vietnamese culture — the duty towards one's elders. In Southeast Asian Confucian tradition, conforming to the group and the group's identity is the social norm; this is explained by the interdependent self-concept discussed below. In Confucian ethics, taking care of and honouring one's elders is crucial. Providing traditional medicine to sick relatives, almost regardless of the price, product or difficulty to obtain, is an essential duty (Wong & Ahuvia, 1998).

The bottom line, as Woerdenbag et al. (2012) claim, is that traditional medicine in Viet Nam is, and will remain, an integral part of the healthcare system and the culture. Even though some products are no longer prescribed by the medicinal literature, culturally, people and TM practitioners may still consider them valuable and are willing to purchase and use them.

2.3.2 Luxury goods and social status

Viet Nam is currently one of the countries with the fastest economic growth in the world — its growth rate is right below China and above India. With the introduction of the "Doi Moi" reform in 1986, economically liberating Viet Nam, national economy started booming. This was further enhanced by the country's adhesion to the World trade Organisation in 2006, which revolutionised the economic landscape (To Nguyen Thi, 2011). In the last few decades Viet Nam has seen astounding economical growth, significantly impacting society. Growing affluence among certain sectors of the population has led to vast social and financial gaps across the country (Drury, 2009). Additionally, there has been a large movement from rural areas into urban centres; in 2006 the amount of the population living in urban areas was less than 30%, compared to 2011 when this number rose to 45% (To Nguyen Thi, 2011). Considering that more growth, further development, and an increase of people with more purchasing power is expected in Viet Nam, it is important to focus on the effect this can have on the consumption of wildlife products.

Markus and Kitayama (1991) describe two different self-concepts: independent and interdependent. Western societies are identified as independent where different individuals are inherently separate and each individual is most significant when regulating his/her own behaviour. Eastern societies, are interdependent, meaning one's identity is part of one's family, culture, social and professional relationships and individual attributes and traits are not considered to represent the self. Current consumer theory describes the behaviour of people from individualistic societies and the market system characteristic of Western countries; this is radically different from consumer behaviour in Eastern societies like Viet Nam (Wong & Ahuvia, 1998).

Unlike what is seen in individualistic societies, people in collectivistic cultures judge others based on their group identities such as family, or social class. People belonging to Confucian societies are under constant pressure to live up to these group expectations in order to maintain 'face'. The concept of face is believed to come from China but is also present in Viet Nam; one might lose face by performing unacceptable behaviours or if the expectations of one's social rank are not fulfilled. Social expectations are reciprocal in nature, so the treatment one receives from others, as well as one's actions can cause loss of face (Ho, 1976).

Since affluence is a relatively new phenomenon in Southeast Asia, it is still considered a novelty and a current cultural fixation, and the medium through which individuals and groups communicate their social standing is highly important. Behaviours also determine the perceptions other people will have of an individual and their group, and thus reinforce social status. If a group dictates that expensive and luxurious possessions or behaviours are socially

acceptable, a good member of the group must adhere to these expectations and display wealth in the same manner in order to fit in. Even though humility is highly regarded in Confucian tradition, more ostentatious consumption is allowed if that is perceived as appropriate to a person's social situation (Wong & Ahuvia, 1998).

All of these concepts help understand the prevalent gift-giving culture in Viet Nam. By presenting gifts appropriate for the receiver, one fulfils his/her duty by complying with the social hierarchy (Wong & Ahuvia, 1998). According to To Nguyen Thi (2011), the greatest need in Asian culture when consuming luxury goods is social status. Choosing a luxury product as a gift not only expresses the wealth of the giver but pays respect and appreciation to the receiver. People may even be willing to pay more for a gift than for a personal purchase. Wild meat, for example, which is perceived as rare and precious, is eaten and bought for others publicly to demonstrate wealth and status as well as respect to the receiver (Drury, 2009).

Wong and Ahuvia (1998) illustrate three types of values products can provide: instrumental, symbolic and hedonic. For Western cultures, who stress the individual experience, a hedonic value is a common motivation for consuming luxury goods. The more a society highlights economic status differences, the more focus there is on products with symbolic value that emphasise those differences. In Southeast Asia consumers are far more concerned with their own social image and status; which indicates that consuming luxury goods to fulfil expectations set by the social group will continue to be an integral part society. Not surprisingly, the Vietnamese have a reputation for being highly concerned with brand, origin and quality of luxury products (Drury, 2011; To Nguyen Thi, 2011). These social traits also help explain the high level of trust and reliance Vietnamese have within their social groups. Word of mouth is known to play a crucial role in acquiring new knowledge, perceptions and ideas, especially when seeking rare, valuable and exclusive items. It is common for international designer brands to include word of mouth and influence by peers in their marketing strategies when introducing products into Viet Nam (To Nguyen Thi, 2011).

Appreciating the complexities and importance of luxury consumption in Viet Nam is relevant since many animal products are considered to be luxury items as well — rare and precious, these products are also indicators of social status. Consumption of luxury items needs to be considered in light of Southeast Asia's economic situation; as more people have the capacity to buy and consume rare products, the more demand there will be and the poaching of wildlife will increase.

2.4 Behaviour Change

Addressing, illegal wildlife trade requires strengthening of law enforcement to halt the supply of animal products, and interventions at the end-markets to reduce demand (Drury, 2011; Felbab-Brown, 2011; Verissimo *et al.*, 2012; Underwood *et al.*, 2013; Duthie, 2014; Gao & Clark, 2014; Challander & McMillan, 2014). The understanding that conservation depends on human behaviour is increasing and social sciences need to be incorporated into the conservation field to

obtain effective results (Balmford & Cowling, 2006; Verissimo *et al.* 2012; Raymond & Knight, 2013).

Behaviour change interventions are coordinated sets of activities designed to change a specific behaviour or behaviour patterns, which are measured in terms of prevalence of these in a determined population (Michie *et al.,* 2011). Michie et al. (2011) describe examples related to the public health field where interventions seek to encourage healthy behaviours and deter harmful ones.

Behaviour change initiatives might be focused on prompting a behaviour considered advantageous for an individual or society, or they can seek to discourage a particular behaviour by making benefits seem less attractive and punishments more severe (Nicholson & Xiao, 2011). Consumer behaviour is both reinforced by the benefits obtained from a product and punished by the costs the consumer assumes (Foxall *et al.,* 2006). There are many models in the literature that help explain how human behaviour takes place and thus how to influence it. The Behavioural Perspective Model (BPM) assumes that "in a given consumption situation the choice is directed towards maximising reinforcement and minimising punishment," this can be applied both to encourage a desired behaviour and to deter a problematic behaviour as shown in the Social Marketing Diamond (Appendix 2) (Nicholson & Xiao, 2011). This approach can be used to dissuade individuals from purchasing and/or using wildlife products.

Conservation efforts that have been carried out in Viet Nam so far have been labeled as demand reduction or awareness raising campaigns. Although these two terms have been used interchangeably, especially when applied to conservation, their distinction must be made very clear. Awareness raising seeks to inform and educate people about a certain issue and similar to demand reduction, intends to influence attitudes, behaviours and/or beliefs for a predetermined purpose. The crucial difference is that providing information does not automatically lead to a change in behaviour (Sayers, 2006; Drury, 2009; Smith & Strand, 2009).

The problem with reliance on awareness raising has already arisen within conservation efforts. Experts consider some awareness raising efforts have been successful but have not led to long-term demand reduction of wildlife products (Drury, 2009; Verissimo *et al.,* 2012). For example, Verissimo et al. (2012) claim that despite evidence disproving the medicinal value of wildlife products being delivered to populations of users, demand for these products remains high. Another main issue that has been identified in behaviour change conservation initiatives is the lack of evaluation (Verissimo *et al.,* 2013). At the moment, it is nearly impossible to say which efforts have achieved a certain level of success because impact evaluation has not been included in project design.

2.5 Social Marketing

Social marketing is described as the use of marketing theories and techniques to influence behaviour in order to achieve a social goal. Social marketing seeks what perceptions influence behaviour, and therefore which ones must be targeted to achieve behaviour change in

a population (Smith & Strand, 2009). Andreasen (1994) argues that social marketing programmes must follow a certain criteria:

1. Understand the target audience's needs, wants, perceptions and present behaviour patterns before actions are taken, through specific research in order to avoid making assumptions about the audience.
2. Strategies are adapted specifically to the characteristics of the target audience.
3. Major elements of the programme must be pre-tested with members of the target audience.
4. Indicators of behaviours are set in place.
5. Programme recognises it faces competition for target audience's behavioural choices.
6. Includes the four P's of the marketing mix.

The four P's of the marketing mix are: product, prices, place and promotion. Product refers to the tool used to make the behaviour easier to adopt. Price is what the audience must give up in order to adopt the behaviour, considering the highest prices are social or psychological. Place are the channels and locations which offer the greatest audience receptivity. Promotion refers to the efforts to persuade the target audience to adopt the behaviour. In addition, using the marketing mix can help define the strategy of a programme (Smith & Strand, 2009).

Rothschild (2008) outlines the most common reasons that hinder success of social marketing programmes are, "default to the education problem, exclude the regulatory problem as not a marketing solution and ignore the power of marketing mix." Similarly, Jones et al. (2005) claim many organisations do not know how to employ social marketing and therefore they tend to under-perform in their attempts to influence behaviour. This has already been recognised in the literature regarding behaviour change interventions in conservation; as McKenzie-Mohr (2000) explains, despite the recognised importance of psychological knowledge to effective programme design, it is still not widely used. Programme managers tend to base their decisions on assumptions instead of research and evaluation of effectiveness is constantly lacking (McKenzie-Mohr, 2000; Verissimo *et al.,* 2013).

Even though limited use of marketing practices and even good conservation practices, have already been identified within conservation marketing programmes (Verissimo *et al.,* 2013; Duthie, 2014), the transition to evidence-based behaviour change interventions is slow. To date, only Verissimo et al. (2013) and Duthie (2014) have carried out research to analyse the effectiveness of conservation marketing. In her study, Duthie (2014) found that the conservation community has not evaluated or tested many of the communications strategies they have employed; although there are some effective and powerful advertisements reaching the target audiences, there are equally ineffective ones as well. Verissimo et al. (2013) highlight that evaluation and therefore evidence-based conservation campaigns are uncommon, which prevents conservationists from ensuring campaigns are effectively designed.

Chapter 3 - Methodology

Research was carried out in this study to acquire as much information as possible regarding the planning and design that has gone into each one of the behaviour change interventions for rhino horn and elephant ivory in Viet Nam. These interventions were determined based on the information provided in Sharif's (2014) compilation of interventions aimed at addressing illegal trade in rhinoceros, elephant, tiger and pangolin products in China and Viet Nam. Additionally, further research was done on the internet to ensure all existing interventions were included and to obtain an initial understanding of the campaigns already delivered in Viet Nam. These interventions were drawn up in a list and the organisations responsible were approached to discuss each one.

Research was conducted in open conversations (Appendix 3) with a specific intervention aimed at demand reduction for rhino horn and ivory in mind, following the grounded theory approach (Hussein *et al.,* 2014). This was the process selected to allow flexibility and follow-up questions relevant to each conversation to obtain as much understanding as possible regarding the challenges, opportunities, goals, and reasoning of the organisations approached (Boyce & Neale, 2006). This method was also used because it allows the information to be divided into themes and categories (Dworkin, 2012) and thus compare the process each intervention went through. Given that the grounded theory method does not test already existing hypotheses but rather uses empirical data to generate concepts and construct theories (Glaser, 1978), it allowed for interpretation and themes within the data to be discovered (Hussein *et al.,* 2014). With this method, extensive descriptions were sought via ample observations from the narratives of the conversations. This permits the researcher to obtain understandings from beneath the surface of the conversations and thus analyse the data thoroughly (Charmaz, 2006).

A social marketing wheel (Figure 3.1) was created using elements from social marketing literature, successful marketing examples (Andreasen, 1994; Jones *et al.,* 2005; Smith & Strand, 2009; WARC 100, 2014; David Ogilvy Awards, 2011) and a combination of the themes that were discussed in the conversations with practitioners. Results of the interventions were compared against this wheel to analyse their success in including these components and thus conducting proper behaviour change interventions.
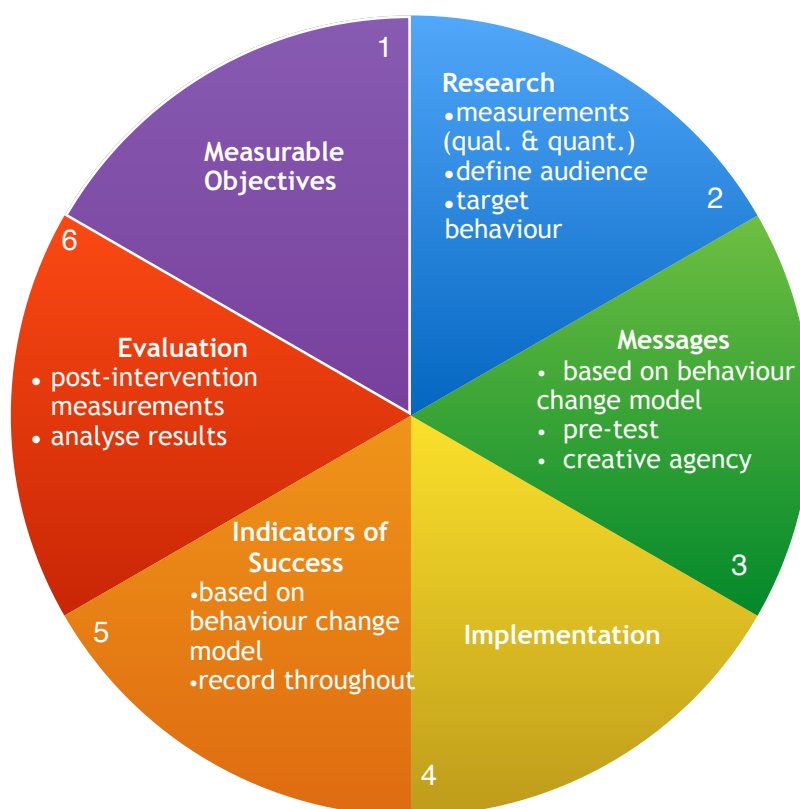
Figure 3.1 Social Marketing Wheel created for this study outlines the basic elements of a social marketing intervention.

Results regarding rhino horn interventions are divided into the following themes: interventions, assumptions, research, intervention design, behaviour change models, implementation, evaluation, challenges in existing interventions, and good practices of calculating sample size for research. These themes were selected from those highlighted in the social marketing literature (Andreasen, 1994; Jones *et al.*, 2005; Smith & Strand, 2009), and was done to enable the comparison between the differences of approaches the organisations have taken. Tables summarising research studies, objectives, target audiences, pre-test methods and indicators of success were used to illustrate the results more clearly. Quotes from conversations were included where appropriate in the analysis to demonstrate clear evidence of the rationale employed.

3.1 Interventions in Viet Nam

An initial list of ten organisations and one government agency, the Biodiversity Conservation Agency (BCA), was put together. All in the list were contacted but it was not possible to arrange a meeting with the BCA. Once in Viet Nam, a different government agency, the Convention on International Trade in Endangered Species of Wild Fauna and Flora Management Authority (CITES M.A.), was included in the list as well. CHANGE is WildAid's in-country partner which is why they are considered one organisation.

A distinction was made when referring to organisations approached and the interventions analysed: ten organisations were approached (including the CITES M.A.) but nine interventions have been analysed in this study, because the Humane Society International (HSI) and the CITES M.A. collaborated in a joint initiative.

Table 3.1 summarises the organisations and government agency that were approached in Viet Nam during a period of three weeks in June, 2015. Conversations were carried out in person in Ha Noi with the first seven in this list and over Skype with the last three organisations since the people most suitable to talk with were in Cambodia, Australia and Ho Chi Minh city (HCMC) respectively.

Table 3.1 Summary of the organisations' and government agency's interventions whose work has been included in this study.

Organisation	Initiative	Contact	Position	Website
FREELAND	Operation Game Change	Phuong Hoang	Project Coordinator	www.freeland.org/#!ogc-launch/car9
TRAFFIC	Chi Campaign	Trinh Nguyen	Demand Reduction Officer	www.traffic.org/home/2014/9/22/innovative-campaign-promotes-success-from-within.html
Education for Nature - Vietnam (ENV)	Public Service Announcements	Doug Hendrie Dung Nguyen	Chief Technical Advisor Vice Director	www.envietnam.org/index.php
World Wild Fund - Vietnam (WWF)	Illegal Wildlife Trade Campaign	Van Nguyen Dao Ngoc	Project Manager	www.worldwildlife.org/threats/illegal-wildlife-trade
Wildlife Conservation Society (WCS)	Trafficking Networks & Government Commitment	Scott Roberton Thuy Hoang Ha Pham	Program Coordinator Program Manager Policy & Comms Coordinator	www.wcs.org/news-and-features-main/vietnam-transnational-wildlife-crime-2.aspx
Convention on Illegal Trade in Endangered Species of Wild Fauna and Flora Management Authority (CITES M.A.)	Awareness Raising Campaign with HSI	Thuong Nguyen	International Cooperation Official Coordinator for Rhino Horn Demand Reduction Campaign	www.hsi.org/news/press_releases/2013/08/rhino_horn_demand_082713.html
Humane Society International (HSI)	Awareness Raising Campaign with the CITIES M.A.	Teresa Telecky	Wildlife Department Director	www.hsi.org/news/press_releases/2013/08/rhino_horn_demand_082713.htm
Wild Act	Various Projects	Trang Nguyen	Founder	www.wildact-vn.org/#our-projects
Breaking the Brand	Stop the Demand	Lynn Johnson	Founder	www.breakingthebrand.org/
WildAid/CHANGE	"No more buyers, no more killers"	Nhi Chau	Program Development Coordinator	www.changevn.org/bao-ve-thien-nhien/wildaid-vn/?lang=en

3.2 Ethics

Anonymity was discussed with each one of the representatives of the organisations and no one requested to remain anonymous. All respondents allowed information and quotes to be attributed to their names and organisations. Thuong Nguyen from the CITES M.A. and Van Nguyen Doc from WWF requested to confirm quotes attributed to them, this has been done via email and quotes in this study were included with permission.

3.3 Sample Size Calculations

Behaviour change interventions aim to alter a particular behaviour in a population; understanding the people performing the behaviour in question is critical (Jones *et al.,* 2005; Smith & Strand, 2009). Naturally, not everyone in a population can be approached to carry out a research study; additionally, given that the behaviour in question might be relevant to only a segment of the population, it is essential to identify this audience and definite a sample size appropriate for it. Sample size refers to the number of individuals included in a study; it is important to establish the sample size to avoid wasting resources, time and effort (Noordzij *et al.,* 2010).

A power analysis was carried out in the programme R (version 3.1.1) to calculate the sample size needed to have a high probability to detect a certain level of demand reduction in rhino horn use. Various calculations were done to determine what the power is at different sample sizes, using real examples of two research studies and hypothetical baselines and various effects of interest (percent of demand reduction). Given that there are two research studies that have identified a percentage of rhino horn consumers (TRAFFIC, 2013b; HSI, 2014) with different baselines, these were used as examples to calculate how much probability different sample sizes have to detect the effect present after an intervention.

Chapter 4 - Results

4.1 Interventions in Viet Nam

Nine interventions seeking to reduce rhino horn consumption were identified in Viet Nam, led by nine organisations and one government agency (Table 3.1). All of these interventions have been or are being conducted presently. There are currently no interventions being carried out to address ivory consumption in Viet Nam. Three out of the ten organisations spoken with mentioned work related to ivory:

- TRAFFIC: conducted market surveys and online research to measure the prevalence of the market, have this information to design a strategy (T. Nguyen, pers comm).
- ENV: dealing with the problem *"on the surface level"* only (D. Hendrie, pers comm).
- HSI: will publish and distribute a children's book I'm a Little Elephant soon (T. Telecky, pers comm).

TRAFFIC, FREELAND and ENV recognise a market for ivory does exist but the latter two agree that it is insignificant, especially when compared to markets in Thailand and China. WWF and the CITES M.A. agree that Viet Nam only plays the role of transit country for ivory. TRAFFIC also describes Viet Nam as a transit country for ivory heading to China.

4.2 Underlying assumptions

4.2.1 Main uses of rhino horn

ENV, Breaking the Brand, FREELAND and TRAFFIC claim enhancing one's social status is the main motivation behind rhino horn consumption and therefore that wealthy people, who acquire luxury goods to confirm their social status, must be targeted and messages should be developed to resonate with them. This conclusion has been drawn from TRAFFIC's research study, and is supported by ENV's TM surveys and Breaking the Brand's interviews. Even though these three organisations do recognise that there is an *"underlying belief in medicinal properties"* (T. Nguyen (c), pers comm) that must be addressed, this is not the priority for their campaigns. According to ENV, TM values will continue existing in Vietnamese culture but those who consume rhino horn for this purpose could continue buying it and would not drive the species to extinction (D. Hendrie, pers comm).

On the other hand, HSI, the CITES M.A., WWF and WildAid/CHANGE claim the main reason for the consumption is belief in its medicinal properties. Even though it has been recognised by all that rhino horn is quite expensive, according to Thuong Nguyen from the CITES M.A., only a small piece of rhino horn is needed for medicinal purposes, so as Teresa from HSI claims, it can be afforded by people from *"all walks of life"*. In addition, Van Nguyen Dao Ngoc

from WWF suggests there is a reason why people choose to purchase rhino horn for medicinal purposes specifically, *"Rich people can use any tonic they want to treat cancer, but they still choose rhino horn for a reason. Because they believe in it, not for status."*

Wild Act and WCS are trying to tackle consumption without targeting a specific main driver behind it: *"Can't separate the status, prestige and health in Viet Nam or China when talking about these products"* - Scott Roberton, Program Coordinator, WCS.

4.2.2 How to Achieve Behaviour Change

Opinions also differ on how behaviour change towards consumption of rhino horn can be achieved in Viet Nam; these range between aiming for public pressure to delivering messages that resonate with consumers, strengthening law enforcement to raising awareness.

- Public Pressure

WildAid/CHANGE and ENV approach rhino horn consumption by focusing on elevating its profile in Viet Nam. With this objective in mind, they have focused on public pressure instead of influencing consumers directly. Doug Hendrie from ENV, claims about rhino horn consumers, *"[The] public will change their mind, not policy or us."* To achieve this goal, ENV has released multiple public service announcements (PSA), some which include Vietnamese celebrities Hong Nhung and Xuan Bac with the reasoning that *"if you admire a celebrity, you'll listen"* (D. Hendrie, pers comm). WildAid/CHANGE deliver messages with celebrities to target the general public, create an image and build conversation on the topic. Even though WildAid/CHANGE has claimed in Viet Nam celebrities do not influence business leaders (who can afford rhino horn) they believe they can influence the public including those in close proximity to the consumers (N. Chau, pers comm).

Those organisations that believe messages delivered should resonate directly with the consumer find that celebrities are not useful for this purpose and therefore reject their use. Thuong Nguyen from the CITES M.A. pointed out the celebrities being used are usually singers and dancers talking about Africa, which is far removed from Viet Nam and not linked to rhino horn consumers' lives at all. According to her, *"Maybe celebrities can influence young people but not older ones who do not trust celebrities."* Lynn Johnson from Breaking the Brand also states, *"business men are not interested in celebrities."*

- Targeting Consumers Directly

TRAFFIC, WWF, HSI/CITES M.A. and Breaking the Brand designed interventions and messages that focus on resonating with the consumers, whether these are people using rhino horn for the belief in its medicinal properties or to enhance their own social status. However there is disagreement about which messages resonate with consumers the most. While Breaking the Brand and TRAFFIC have found that messages revolving around killing rhinos spark no empathy, HSI has anecdotal evidence that people *"do feel for rhinos"* (T. Telecky, pers comm)

once they are shown images of the poaching reality. This has been observed in people's reaction during, or at the end of workshops where this information is shared. Breaking the Brand found the message that resonate with consumers and could influence their behaviour are those that create fear and anxiety around consuming rhino horn if it leads to a negative impact on health or social status (Johnson, 2014) (Appendix 4). These messages were considered effective because of the reaction observed during phone interviews with potential consumers.

TRAFFIC's Chi campaign on the other hand, focuses on addressing the power, credibility and strength of will that business men believe rhino horn provides for their lives and image (Appendix 5). The CITES M.A. and HSI deliver messages that indicate rhino horn is a waste of money because it has no medicinal properties; they are currently working with scientists as well to show evidence to support this claim.

- Law Enforcement

WCS's approach consistently aims to improve government commitment to illegal wildlife trade and states that crime prevention and messages revolving around penalties for trading or using rhino horn can be more effective than awareness raising (S. Roberton, pers comm). Scott Roberton says, *"Forget pop stars with their makeup standing next to a rhino, get the guy in the Kenyan prison, use that to show people that you will go to jail and that it sucks. Get the message 'I don't want to go to jail'."* WCS believes that *"high-level commitment to an issue will change people's behaviour overnight"* (S. Roberton, pers comm). Their approach is to influence policy makers to achieve high commitment to this problem and have them spread the word about it, something Ha Pham, Policy and Communications Coordinator, has referred to as *"Network marketing, but it's more powerful and for more important people than social marketing."*

- Awareness Raising

Wild Act spreads the word against rhino horn consumption by engaging children and young adults and encouraging them to share the message. Similarly, FREELAND's messages is aimed at users and buyers directly as well as young generations. HSI and the CITES M.A.'s campaign has given a lot of importance to awareness raising. Questioning participants about what information they remember after a workshop has been a significant part of their evaluation strategy. *"By changing people's awareness they are automatic to change their perception,"* said Thuong Nguyen from the CITES M.A.

4.3 Prior Research

Of the nine interventions studied, four carried out research to identify consumers of rhino horn and/or reasons driving consumption and one conducted research to discover the medicinal properties that TM practitioners attribute to this product (Tables 4.1 and 4.2). Three of the four research programmes were developed with the help of two consultant agencies:

Nielsen, an American global information and measurement company which operates in Viet Nam, and IPSOS, an international research company also operating in Viet Nam.

Table 4.1 Summary of research conducted with consultant agencies.

Consultant Agency	Organisation research year	Research Objectives	Sample	Quantitative Results	Qualitative Results
Nielsen	• HSI 2012	Measure the percent of rhino horn consumers and understand reasons for consumption	1000 random people divided among Ha Noi, HCMC, Nha Trang, Da Nang, Hai Phong	4.2% of the people interviewed were found to be rhino horn consumers	Main reason for consumption: medicinal properties of rhino horn
	• WildAid/ CHANGE 2014	Understand attitudes and awareness regarding rhino horn use	400 randomly selected individuals divided evenly in Ha Noi and HCMC	2% of people interviewed admitted to using rhino horn	Main driver: belief in medicinal properties Consumers: those who can afford it
IPSOS	• TRAFFIC 2013	Collect quantitative and qualitative data of rhino horn consumers and understand motivations for consumption	600 randomly selected individuals from Ha Noi and Ho Chi Minh City	5% of the people interviewed were found to be rhino horn consumers	Main reason for consumption: enhancing one's social status, underlying belief in medicinal properties

Working with consultant agencies has enabled the measurement of the success of campaigns. Teresa Telecky from HSI explains why their programme led with Nielsen, *"We're very focused on wanting to know if what we're doing is having any impact."*

Table 4.2 Summary of research conducted without consultant agencies.

Organisation research year	Research Objectives	Sample	Quantitative Results	Qualitative Results
• ENV 2011	Identify medical properties attributed to rhino horn by TM practitioners	25 TM practitioners in Ha Noi 53 TM practitioners in Ho Chi Minh City	69.2% of 78 practitioners interviewed believe rhino horn's main use is to detoxify the body	N/A
• Breaking the Brand 2013	Understand who is consuming rhino horn, what are the motivations behind consumption, and what messages need to be delivered to influence consumption behaviour	Vietnamese citizens in Ha Noi and Ho Chi Minh City who matched the consumer profile according to TRAFFIC's study.	N/A	People will stop consuming rhino horn if consumption will lead to negative health or social status impacts

4.4 Intervention Design

4.4.1 Objectives

Among the nine interventions that were studied only one has objectives that can be measured in quantifiable terms: Intervention 6 (Table 4.3).

Table 4.3 Summary of objectives.

Interventions	Objective
Intervention 1 (Breaking the Brand)	Change direction of behaviour change campaigns so they focus on rhino horn users.
Intervention 2 (HSI/CITES M.A.)	Reduce demand for rhino horn in Viet Nam.
Intervention 3 (ENV)	Elevate issue amongst public and consumers, address the myths of magic medicine and status.
Intervention 4 (FREELAND)	Raise awareness, educate, spread the word about the issues with rhino horn use.
Intervention 5 (WWF)	Deliver message of demand reduction for consumption of rhino horn, ivory and tiger to top leaders of the world.
Intervention 6 (TRAFFIC)	Reduce demand for rhino horn by 50% in Viet Nam by 2020.
Intervention 7 (WCS)	Achieve high-level government commitment to illegal wildlife trade.
Intervention 8 (Wild Act)	Raise awareness of rhino horn consumption and get people involved.
Intervention 9 (WildAid/CHANGE)	Raise the profile of rhino horn issue and increase the level of public engagement.

From the objectives described in Table 4.3, the evidence gathered shows that only one has been set up using indicators that can be directly measured and evaluated. The majority of them seek to achieve objectives that could potentially help determine the success of an intervention at a superficial level but any possible evaluation will not show any actual evidence of impact.

4.4.2 Target Audience

Eight out the nine interventions defined a target audience (Table 4.4) to whom they would direct their messages. As explained above, this does not mean that all but one conducted consumer research studies, but rather that they used already existing research or their own experience, to identify who the main rhino horn consumers are, and then designed their messages with this in mind.

Table 4.4 Summary of different target audiences.

Interventions	Target Audience
Intervention 1 (Breaking the Brand)	Business men and women belonging to high income demographic. Determined using TRAFFIC's research.
Intervention 2 (HSI/CITES M.A.)	Middle-aged women, businesses, scientists and children. Aim to target society at large. Determined using their own research.
Intervention 3 (ENV)	General public. No specific audience.
Intervention 4 (FREELAND)	Business people, government, potential consumers, middle-aged women. Determined using TRAFFIC's, HSI's, IUCN's and Breaking the Brand's research.
Intervention 5 (WWF)	General public and specifically wealthy people. Determined using their own research.
Intervention 6 (TRAFFIC)	Business men, users who focus on enhancing social status. Determined using their own research.
Intervention 7 (WCS)	Government and policy makers. Following their approach in Viet Nam to tackle illegal wildlife trade.
Intervention 8 (Wild Act)	Children and students. Following their approach to engage young people.
Intervention 9 (WildAid/CHANGE)	Business sector, monks, doctors, children, women. Determined from their own research.

Some of the organisations leading these interventions recognise the importance of determining a specific target audience.

"It's very important to define the target audience, the behaviour change determinants, the different messages, what affects them to change or not and why. Policy people are also human beings, who have behaviour determinants as well" - Thuy Hoang, Program Manager, WCS.

This depends on the intervention's objective. For ENV, a stated goal is to elevate the profile of the issue so that everyone in Viet Nam becomes more aware of the issue. This is why their messages are aimed at the general public.

"We want to have people say 'rhino', 'protection' once a day, keep the issue hot, give the public an opinion on rhinos, have the chance to target consumers with support from the public. This is better than having no one know about it. Back in 2011 people didn't think it [rhino horn consumption] *was an issue in Viet Nam"* - Doug Hendrie, Chief Technical Advisor, ENV.

4.5 Behaviour Change Models

Even though all of these interventions have set out to address behaviour change regarding rhino horn consumption, two out of the nine interventions are using behaviour change

models. TRAFFIC used a combination of models including Roger's Diffusion of Innovations Model (Rogers, 1995), Vlek's Needs Opportunities Abilities Model (VIek, 2000) and the NSMC social marketing benchmark criteria (NSMC). Breaking the Brand used the Spiral Dynamics Model (Beck & Cowan, 2014). The other seven interventions are based on practitioners' and the organisations' past experience.

"We don't base strategy on theory or model but on experience" - Chau Nhi, Program Development Coordinator from CHANGE, WildAid's partner in Viet Nam.

4.6 Implementation

4.6.1 Creative Agencies

Two organisations in Viet Nam have worked with creative agencies to design and launch their campaigns. TRAFFIC is working with Public Services International (PSI), an international non-profit organisation expert in behaviour change campaigns, in developing the Chi campaign. Breaking the Brand is working with TKL Media (TKLM), an agency part of the Datviet Vac Group, Viet Nam's largest media and entertainment conglomerate.

- **PSI**

PSI has led in conducting in-depth interviews within the social sector that rhino horn consumers are understood to be a part of to ensure messages being developed will resonate with the target audience. PSI is and will be working to evaluate the coverage and results of Chi campaign.

- **TKLM**

TKLM recommended the venues via which Breaking the Brand should deliver their messages, has helped with logistics and developing the messages for the specific target audience.

4.6.2 Pre-testing messages

Four out of the ten organisations approached have tested their messages with their target audience before launching an intervention (Table 4.5).

Table 4.5 Summary of pre-test methods used before delivering messages.

Organisation	Pre-test method
Breaking the Brand	Tested message on Vietnamese community in Melbourne and contacts in Ha Noi and HCMC.
ENV	Speed test in focus groups so people can select their favourite PSA. Have only been done with some PSAs, not all.
TRAFFIC	PSI led focus groups to test messages of the Chi campaign.
Wild Act	Tested messages on relatives.

4.7 Evaluation

Only two out of the nine interventions studied have the capacity to evaluate and provide evidence of their results. These campaigns run by HSI and TRAFFIC, are the only two that produced baselines to compare results with.

- HSI/CITES M.A.

The first surveys were conducted in August, 2013 in six cities: Ha Noi, Ho Chi Minh City, Hai Phong, Can Tho, Nha Trang and Da Nang and surveyed 1000 people in total. Nielsen includes all six cities in their studies to get a representation of north, central and south Viet Nam. The second measurement was done in August, 2014 in all six cities again; demand reduction was recorded and these results were made public at the end of 2014 (Appendix 6). When asked about these results however, Teresa Telecky, Wildlife Department Director of HSI, said the reduction in demand published shows the cumulative results of all the behaviour change interventions taking place in Viet Nam, not just their own campaign. In a media interview Telecky says, *"The results offer a vital ray of hope for the survival of rhinos"* (Milman, 2014). The next measurements will be taken in 2016.

- TRAFFIC

Results from the Chi Campaign have not been measured yet but the initial baseline recorded in the study led by IPSOS will be compared with results gathered by a second study to be conducted before the end of the campaign in 2017 and final impacts will be evaluated by 2020 when demand is expected to have dropped by 50% (T. Nguyen (c), pers comm). TRAFFIC SEA - GMP Demand Reduction Officer, Trinh Nguyen commented, "[We] *are not 100% sure we are changing behaviour but we are engaging people so they can act."*

4.7.1 Other Indicators of Success

Although only two campaigns have formally designed evaluation plans in their projects, other indicators of success have been used (Table 4.6).

Table 4.6 Summary of interventions that have used other indicators of success.

Indicator of success	Organisation	Measurement	Result
Social Media	Breaking the Brand	Interest on Facebook	Ha Noi and HCMC are their top following cities
	Wild Act	Level of participation on Facebook	Young people engage quite a lot
	WildAid	Number of times campaign messages are shared shows how much people care about the topic	Many mentions of WildAid's campaign, images and messages
Pledges	HSI/CITES	Number of pledges signed by students and Women's Association	200,000 pledges from Women's Association
	TRAFFIC	Workshop participants to sign a pledge to engage them in the Chi community	Unknown
	WildAid	Online petition asking celebrities to share and spread message rhino horn is keratin	20,000 signatures from the public
Anecdotal	Breaking the Brand	People's reaction to information	People were concerned upon hearing rhino horn is being poisoned. Buddhist monks have said they will support efforts
	Wild Act	People's reaction to different messages	Message horns are poisoned worries people
	HSI/CITES	People's reaction at workshops	Women giving thanks for knowledge of lack of evidence of rhino horn's medicinal properties
	ENV	Feedback from PSAs	People prefer positive messages
People Reached / Trained	HSI/CITES	People who can be reached via Women's Association	Estimated 10 million people (800,000 members in Ha Noi, nuclear family 8 people)
	WWF	Number of people messaged via their mobile company	Reached everyone using that mobile carrier
	ENV	Business partnerships. PSAs running in national television	Partners with BMW, Mercedes, 20/30 high-end luxury goods companies

Practitioners from the organisations approached are doubtful whether proper evaluation measures can be recorded from behaviour change interventions.

"Results can't be 100% correct, understandably. Perception [is] *very abstract."* - Thuong Nguyen, International Cooperation Official and Coordinator for Rhino Horn Demand Reduction Campaign, CITES M.A.

Doug Hendrie from ENV, is also sceptical pre-post analysis can be done to show the results of one source of behaviour change since there are so many other factors the audiences are exposed to. Phuong Hoang from FREELAND also expressed her concern regarding how trustworthy results that have been recorded and published are (P. Hoang, pers comm).

"It is hard to measure impacts of a communication campaign. Few methods available to evaluate impacts of a campaign effectively. In addition, impacts cannot be immediately measured because these campaigns don't show impact or results immediately," said Van Nguyen Dao Ngoc, Project Manager, WWF - Vietnam.

Social media has been used to gauge interest, engagement and activity by looking at the number of posts and articles shared and the number of Vietnamese followers on Facebook. Pledges have been used as an indicator of success of commitment to either abstain from buying or using rhino horn or to help spread the message. Although none of the interventions can provide evidence that signing pledges leads to behaviour change, collecting people's signatures has become quite common. For example, WildAid has collaborated with well-known Vietnamese artists who have publicly signed a pledge committing to reject the use of rhino horn. Workshops led by HSI/CITES M.A. conclude by asking participants to sign a pledge with the same commitment in mind. TRAFFIC has also included pledge-signing in certain events to engage participants into the Chi community.

Thuong Nguyen from the CITES M.A. commented pledges have an impact at an individual level, *"Commit by yourself, respect your pledge,* [we] *can't go in and check everyone."*

Anecdotal information has become quite important particularly for informal pre-testing of messages; organisations have taken into account reactions observed at workshops or during interviews to identify which messages provoked the reaction desired. Some of the anecdotes that have been used as evidence that messages are successful are:
- Women in workshops who are very grateful to learn rhino horn does not have medicinal properties and promise to spread the word among their circles.
- Upon hearing rhino horn might be poisoned, one man said his friend whose son suffers from cancer would finish the piece of rhino horn currently being used to treat his child but would not purchase anymore after that (T. Telecky, pers comm).

The number of people reached has also been used as an indicator of success for some of these campaigns. Whether this has been measured via social media, telephone companies,

exposure on TV channels or workshop attendance, the number of people reached is often considered as a way to tell if a message is effective or not, even though this number does not indicate anything regarding whether those exposed changed their behaviours or are even consumers.

4.8 Social Marketing Elements

When compared to the social marketing wheel (Figure 3.1) outlined in the previous chapter, it is easy to see the interventions in Viet Nam do not include these components of behaviour change programmes (Table 4.7).

Table 4.7 Summary of interventions which have included social marketing components.

Elements	Interventions
Measurable Objectives	• TRAFFIC
Research	
• **Measurements (Qualit & Quant)**	• TRAFFIC • HSI/CITES • WildAid/CHANGE • Breaking the Brand (just qualit) • ENV (just quant)
• **Target Audience**	• TRAFFIC • HSI/CITES • WildAid/CHANGE • FREELAND • WildAct • Breaking the Brand • WWF • WCS
• **Behaviour Change Model**	• TRAFFIC • Breaking the Brand
Messages	
• **Pre-testing**	• TRAFFIC • Breaking the Brand • Wild Act • ENV
• **Creative agency**	• TRAFFIC • Breaking the Brand
Implementation	• TRAFFIC • HSI/CITES • WildAid/CHANGE • FREELAND • ENV • WildAct • Breaking the Brand • WWF • WCS
Indicators of success	None recorded
Evaluation	• TRAFFIC • HSI/CITES

4.9 Significant Challenges in Behaviour Change Interventions

The three most pressing challenges with behaviour change interventions which were identified by the organisations approached are: lack of enforcement, lack of cooperation amongst organisations and issues with the definitions of 'demand reduction'.

4.9.1 Lack of enforcement

Eight out of the ten organisations approached referred to the strengthening of enforcement as one of the necessary changes in Viet Nam if demand reduction is to work. The majority stressed that without law enforcement, demand reduction cannot be successful; organisations who have agreed on this have already started their own work with law enforcers. According to Scott Roberton from WCS, there is currently no perceivable risk in trading or consuming rhino horn. People who are involved in the trade know that even if they are imprisoned, officials can be bribed and those guilty of the crime can easily be released (S. Roberton, pers comm). Representatives from TRAFFIC and FREELAND also mention corruption within law enforcement agencies in Viet Nam as part of the problem. In some cases this led to a conversation regarding the commitment required from rhino horn supply and transit countries:

"[There are] *many reasons for the increase in the poaching crisis, consumption in Viet Nam is only one,"* - Thoung Nguyen, CITES M.A.

4.9.2 Lack of cooperation among organisations

Out of the ten organisations approached, six brought up how lack of cooperation between all of those working on behaviour change interventions in Viet Nam is an issue. Trang Nguyen from Wild Act pointed out practitioners are not connecting, talking or sharing to ensure there is no overlap or to ensure the work delivered is as effective as possible. Dough Hendrie from ENV clarified it is not necessary for all of those involved to work together but did state it would be beneficial to have everyone deliver the same message.

On the other hand, Scott Roberton from WCS says, *"There is no one solution and for some* [consumers], *it will be a different thing, a different convincing factor and we need to do all of them."* Teresa Telecky from HSI views different approaches in a positive light and thinks it is beneficial different groups are focusing on different target audiences and delivering various messages. Van Nguyen Dao Ngoc from WWF does not think it is possible for organisations to work together and agree to deliver one single message. According to her, it requires a champion to bring organisations together and share common messages.

4.9.3 Issues with definitions

Seven out of the ten organisations acknowledge the problem of defining clearly the differences between 'demand reduction' and 'awareness raising' and how to use each one.

"Demand reduction is like a fashion, everyone is doing it, but what is it and what do you aim for?" - Van Nguyen Dao Ngoc, Project Manager, WWF - Vietnam.

Thuong Nguyen from the CITES M.A. revealed their campaign with HSI has received criticism because it has been labeled as awareness raising and not demand reduction but she points out awareness raising is the methodology and the objective is to change behaviour, "[One] *can't differentiate because you need awareness raising and policy to achieve demand reduction."* Scott Roberton from WCS highlighted the difference between demand and actual consumption; according to him demand for a product refers to the preference for the product while consumption refers to the actual behaviour. Clearly, as Trinh Nguyen from TRAFFIC has noted, this has been a learning process for everyone involved. Additionally, Lynn Johnson from Breaking the Brand, has emphasised the need to define demand reduction correctly since those who advocate for the legalisation of rhino horn have pointed out how much funding has been invested in demand reduction campaigns with no results thus far. Many of the campaigns that have been launched, according to Johnson, seek to raise awareness, not reduce demand; therefore by defining these interventions correctly, those in favour of legalising rhino horn will not be able to use this argument to support their case (L. Johnson, pers comm).

4.10 Sample Sizes Needed to Detect an Impact

This study shows that evaluating impact has not been part of the project design for the majority of the interventions in Viet Nam; as discussed above, part of the problem is that practitioners do not know how to measure and evaluate prevalence of consumption among their key audiences. First, it is important to determine the segment in the population that must be interviewed (Macorr Research Solutions). For example, TRAFFIC's study claims the main motivation for consuming rhino horn is enhancing social status amongst high-income individuals. In this case, the research needs to focus on whether demand reduction can be detected among these individuals only, not the entire population. Once the scope of the research study is established, sample size needs to be calculated to determine what is the probability a specific decrease in demand, called effect of interest, will be detected from the research (Macorr Research Solutions).

4.10.1 TRAFFIC and HSI

The power analysis conducted using TRAFFIC's and HSI's baselines, 600 individuals with 5% consumption rate and 1000 individuals with 4% consumption rate respectively, compares different effects of interest: 80%, 50%, 35% and 20%, meaning the percent of demand reduction interventions seek to achieve. These results tell us what is the probability of finding a difference in demand reduction at different sample sizes, assuming one is sampling randomly from a homogenous population. This is different depending on the different effect of interest studies

set and considering that how high a power is to detect change is adequate is entirely subjective. The larger the effect of interest, the smaller the sample size needed to detect change because whether the change is present or not will be easier to see. TRAFFIC and HSI need similar sample sizes in their second studies even though their initial baselines are different (Figure 4.1).
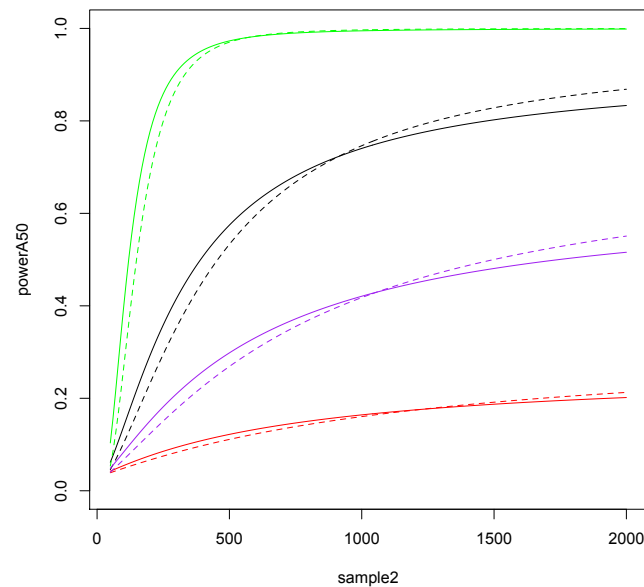
Figure 4.1 Simple line = TRAFFIC (600 baseline, 5% consumption rate) Dashed line = HSI (1000 baseline, 4% consumption rate). Green = 80% effect of interest (demand reduction), black = 50% effect of interest (demand reduction), purple = 35% effect of interest (demand reduction), red = 20% effect of interest (demand reduction).

According to these calculations, in order to have a 90% chance of detecting an 80% reduction in rhino horn demand over the given period time of an intervention, TRAFFIC and HSI would both need a sample size of 500 individuals. As can be seen in Figure 4.1, to have a 80% chance of detecting a 50% demand reduction of rhino horn consumption, the research studies would need 2000 individuals.

4.10.2 Hypothetical calculations

The second power analysis which compares different hypothetical baselines and effects of interest, assuming the same rate of consumption of 5%, shows what the probability of finding a specific drop in demand (50%, 25% or 10%) is considering three different baselines: 3000, 1000 and 500 individuals.

Figures 4.2a, 4.2b and 4.2c show that the smaller the effect of interest (demand reduction) the larger sample is needed to be able to detect whether that difference is present or not. The probability of detecting a low effect of interest (Figures 4.2b, 4.2c) is even lower when the baseline is also small. While a study with an initial baseline of 3000 individuals performs somewhat well (power of 0.6) if the second measurement also includes 3000 people, a study with an initial baseline of 500 individuals has a very low probability of detecting the same effect

of interest even if 3000 people are surveyed in the second measurement. However, if the effect of interest is 50% or higher, even if the initial baseline is of 500 participants, there will be more than a 50% chance to detect this difference even if the second measurement is of 1000 participants (Figure 4.2a).
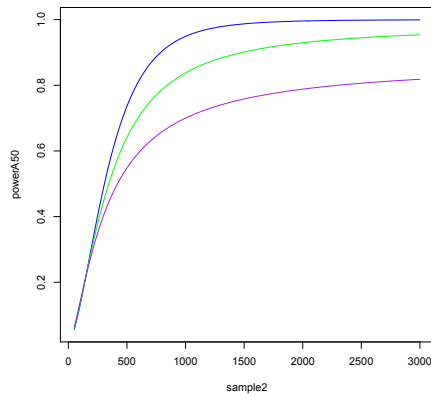
Figure 4.2a Blue = baseline of 3000 individuals, green = baseline of 1000 individuals and purple = baseline of 500 assuming 5% consumption rate and 50% effect of interest for all.
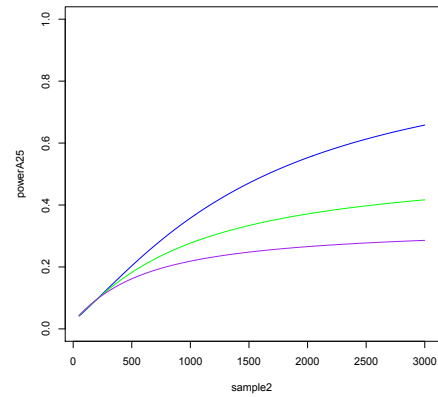
Figure 4.2b Blue = baseline of 3000 individuals, green = baseline of 1000 individuals and purple = baseline of 500 assuming 5% consumption rate and 25% effect of interest for all.
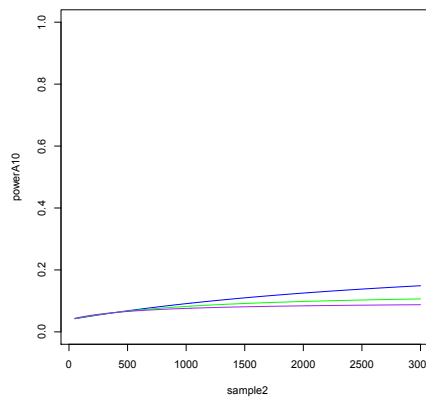
Figure 4.2c Blue = baseline of 3000 individuals, green = baseline of 1000 individuals and purple = baseline of 5000 individuals. Assuming 5% consumption rate and effect of interest for all.

Chapter 5 - Discussion

Behaviour change interventions in Viet Nam differ from each other greatly and very few have included the different elements of the social marketing wheel (Figure 3.1) in a satisfactory manner, as can be seen in Table 4.6 in the previous section.

5.1 Objectives

Determining measurable objectives is crucial for marketing campaigns (Britt, 1969; Stem, 2007; Steward & Hess, 2011; David Ogilvy Awards, 2011; WARC 100, 2014), but unfortunately this has not been demonstrated in those interventions studied. Britt (1969) introduced the common deficiencies when determining objectives: failure to state an objective in quantifiable terms and failure to identify the audience are the two most relevant for conservation interventions with a behaviour change component. This can be seen quite clearly when looking at the objectives set by the different interventions in Viet Nam. Without objectives that can be measured directly and a time period over which the objectives are expected to be met, accurate evaluation of these projects cannot be delivered (Britt, 1969; Powers, 2004; Steward & Hess, 2011; David Ogilvy Awards, 2011; WARC 100, 2014).

5.2 Research

5.2.1 Measurements

Only two of the interventions studied conducted research to create baselines with evaluation in mind. However, it must be taken into consideration that not all the research studies sought to identify the prevalence of the rhino horn market. Three studies were conducted with the purpose of understanding specific perceptions of this product or motivations driving consumption. These studies can be used as baselines to compare the nature of consumption trends over time and to develop messages.

5.2.2 Target Audience

One of the points of great confusion and discord with this kind of work has been how to deliver messages that have the power to influence behaviour. First, it must be clear who the interventions are intended for, this is an area where marketing principles can be helpful since this field has developed appropriate strategies to speak to their audience (Wilkie & Moore, 2003; Jones *et al.,* 2005; Michie *et al.,* 2011; Verissimo *et al.,* 2012, 2013; Duthie, 2014). Successful

marketing campaigns position their target audience at the centre of the research in order to understand people's values perceptions, attitudes, motivations, drivers and behaviours (Smith & Strand, 2009; David Ogilvy Awards, 2011; Verissimo *et al.,* 2013; WARC 100, 2014). For the interventions studied, target audience depends on the approach of that particular organisation. For example, WCS's approach is to influence policy makers and the government; Wild Act, ENV and WildAid are focusing on raising the awareness of the public and elevating the profile of the topic; and TRAFFIC, HSI, the CITES M.A. and Breaking the Brand are concerned with delivering messages that resonate with the consumers. Considering these different approaches helps understand how each organisation has selected their target audience. Focusing on a general audience however, makes it challenging to understand perceptions and behaviour properly, which endangers the success of messages delivered (Britt, 1969).

5.3 Messages and Implementation

The truth remains that many assumptions have been made regarding how to change rhino horn consumers' behaviour. All of the organisations studied are delivering messages with the purpose of discouraging people to buy and/or use rhino horn. Together, they might all contribute to influencing the population at large and to keep the general public informed, and even though there may be indications that show this has worked, there is no evidence to assess the results of these efforts so far (Verissimo *et al.,* 2013). Even though some practitioners recognise there may be some benefits of targeting different people with various messages, campaigns should still be based on sound theory and real behaviour change models (Cramphorn, 2004; Stem, 2007; Margoluis *et al.,* 2009; Smith & Strand, 2009; Michie *et al.,* 2011; Verissimo *et al.,* 2012).

One example that clearly shows the risks of not using theory and behaviour change models is the extensive use of awareness raising. Although some interventions have been based on the belief that providing information to rhino horn consumers is sufficient to change their behaviour, human behaviour is not influenced as easily (McKenzie-Mohr, 2000; Sayers, 2006; Drury, 2009; Smith & Strand, 2009). The Theory of Reasoned Action (TRA), presented by Fishbein and Ajzen (1975), hypothesises that a person's behaviour is a result of their attitude to that specific behaviour, which is based on the information acquired regarding the "attitude object", therefore, attitudes and behaviours can be altered when new information is presented. This theory is based on the assumption that individuals use new knowledge to avoid detrimental outcomes. Other studies have demonstrated that when people learn that their behaviour is having a negative impact on other species, people are likely to adapt their behaviour to reduce their impact (Harrison, Newholm & Shaw, 2005; Pearson *et al.,* 2014).

However, decades worth of studies prove that persuading individuals is much more complicated than that. Individuals are known to not always respond rationally to information and will even make conscious decisions to avoid certain facts. For example, enhancing knowledge and the importance of water conservation did not result in householders changing

their water consumption habits (Geller, Erickson & Buttram, 1983). In a different study, householders who participated in energy conservation workshops did not change their behaviours at home despite that changes in knowledge and attitudes towards energy efficiency were recorded (Geller, 1981). It is now understood that behaviours are not only influenced by awareness on a subject but also by social context, political and cultural forces and even the degree to which the source of information is trusted (Drury, 2009). For example, information presented by sources that have a recognisable commercial interest or private agenda, will be considered less trustworthy than a source without such interest, like a peer or relative (Alaszewski, 2005).

When applied to Viet Nam, TRA presents even further limitations since making individual choices based on individual knowledge is not characteristic of collectivistic and interdependent cultures (Drury, 2009). Clayton and Myers (2009) clarify regarding awareness, "accurate information gives individuals the power to evaluate the consequences of their actions, and to make informed decisions about future behaviour, consistent with personal values and ethical frameworks." The final part of this statement is absolutely crucial to understand — personal values and ethical frameworks play a massive role in determining the decisions people make about their behaviour and these will be vastly different depending on the target audience (Verissimo *et al.,* 2012). However, some interventions insist on focusing in awareness raising and relying on indicators that perhaps show evidence of progress, but not success of behaviour change (Brossard, Lewenstein & Bonney, 2005). As Verissimo et al. (2012) point out, the links between delivering information and behaviour change "are tenuous at best." The benefit of using a behaviour change model is that this can provide a blue print of what indicators to look for and which ones indicate real success (Ambler, 2000).

The level to which an information source is trusted also needs to be considered, specially when international organisations are delivering messages in foreign countries with different cultures, beliefs and consumption behaviours (Verissimo *et al.,* 2012). The use of celebrities has been debated in the conservation sector (Duthie, 2014), and despite the potential disadvantages that have been discussed, local and international organisations in Viet Nam still use famous individuals to spread messages. In her study, Duthie (2014) demonstrates that a lack of evaluation with the use of celebrities is taking place across social marketing campaigns in the conservation sector. This also emphasises the importance of working with experts who can and lead on the design and monitoring of social marketing campaigns (Margoluis *et al.,* 2009); which can be considered as a benefit of working with local creative agencies. As TRAFFIC and Breaking the Brand have discovered, this can help with designing messages and with the implementation of the campaign (T. Nguyen (c), pers comm; L. Johnson, per comm).

5.4 Indicators of Success and Evaluation

Even though evaluation plays an essential role in project design in both marketing and conservation fields, to adequately measure the success of interventions (Britt, 1969;

Sutherland *et al.*, 2004; Steward & Hess, 2011; Verissimo *et al.*, 2013; Duthie, 2014; Ewen, Soorae & Canessa, 2014), there are reasons why this is not the norm with the interventions studied. This is the case across conservation interventions that seek to achieve behaviour change (Verissimo *et al.*, 2013; Duthie, 2014). The lack of evaluation usually comes from the urgency that drives conservation planning. With limited time left to act, interventions are launched without being guided by any evidence of success. As a result, evaluation is rarely incorporated into project planning and comes in as an after thought when none of the required information has been collected to assess impact and cannot be done (Margoluis *et al.*, 2009). This has been recorded among the organisations discussed in this study and results show that some practitioners do not know how to design evaluations they can rely on. This perhaps is a sign that cooperating with those who do have the expertise is necessary.

Scarce funding has also been identified as an impediment to evaluate conservation initiatives in general (Duthie, 2014), which is not the exception with interventions in Viet Nam. *"Some NGOs don't have a follow-up plan of their own activities and they drop projects halfway through because they are very challenging or they don't have the funding to continue them,"* shared Phuong Hoang from FREELAND. Lynn Johnson, from Breaking the Brand, points out that there is an imbalance in funds being spent to address illegal wildlife trade since large amounts are being directed towards anti-poaching and supply preventions instead of demand reduction at end-markets. According to Johnson, funding sources, mostly donors, need to be educated so they understand that campaigns need to tailor their messages for the consumers, not for conservationists or supporters.

A lack of proper evaluation has led organisations to use indicators of success which are not based on theory but rather wishful thinking and assumptions (Stem, 2007). Margoluis et al. (2009) emphasise the importance of ensuring adequate theory of change, which is not demonstrated by focusing on activity in social media, number of pledges and signatures collected after an event or the number of people that have been exposed to a message. There is no evidence that links any of these examples with an actual change in behaviour; which is one of the problems with relying on past experience when there is no evidence of success (Stem, 2007).

In addition, conducting campaigns with no evaluation plan has also led organisations to skip important steps when developing their work, like pre-testing messages (Cramphorn, 2004; Powers, 2004; Ferraro & Pattanayak, 2006; Duthie, 2014). Less than half of the organisations approached test their messages before exposing them to the audience. Pre-testing identifies effective messages to avoid spending time, effort and resources in those that will not resonate with the audience. It is better to reach the right audience fewer times with effective advertising, than to deliver messages with meaningless imagery and ideas as often as possible (Cramphorn, 2004). As Ferraro and Pattanayak (2006) state, "you cannot overcome poor quality with greater quantity." Additionally, if new information does not feel right, the target audience can unconsciously disregard it or adapt it to fit previous beliefs and perceptions (Cramphorn, 2004). In the case of wildlife consumption, this could be severely detrimental; if the prior perception is that animal-based medicines enhance and maintain one's health and

communication materials are inadequately designed, users can adapt these messages to support their previous beliefs.

As a result, there have already been examples of messages that have failed; Scott Roberton from WCS referred to the messages that focused on breaking down the myth that rhino horn can cure cancer as a *"classic NGO mistake."* There is evidence to prove that people do not believe rhino horn cures cancer but rather, that along with other treatments and medicines it helps maintain good health. In fact, in the Dictionary of Vietnamese Pharmaceutical Products cancer is not mentioned as a disease rhino horn can treat (Nash, 1997). The TM survey conducted by ENV in 2011 demonstrates further proof that rhino horn is not believed to treat cancer, not even by TM practitioners (ENV, 2011). This survey informed ENV's messages; before the survey was conducted, messages were going to focus on addressing the cancer cure myth. Once the results were obtained they developed a different approach entirely. This is an example of good practice and shows the benefits conducting a study has, both for effective communication and to spend resources wisely (Duthie, 2014). Furthermore, focusing on non-existent uses could have a perverse effect by leading people to think this use might exist and thus creating a market or an interest that did not exist before.

The norm in Viet Nam has been to learn as projects move along. Such is the example with the messages that focus on appealing to rhino horn consumers' empathy. Some of the organisations leading these interventions, including TRAFFIC, Breaking the Brand, FREELAND, WWF and ENV, have already accepted that rhino horn consumers feel too far removed from rhino poaching in Africa, they do not see themselves as killers and do not see nor feel the link between their purchase and poaching. This is an extremely valuable lesson because it shows that messages that display dying animals do not always inspire feelings of concern, guilt or sadness, as well as proving that negative messages that place the blame on consumers are simply not effective (T. Nguyen (c), pers comm; P. Hoang, pers comm; D. Hendrie, pers comm).

Organisations are trying to learn from this, but unfortunately this has taken months or even years of certain messages being exposed to the public with no effect. Such has been the case with what Doug Hendrie from ENV, refers to as a failed PSA in which rhino horn consumers were called 'ignorant' and 'uneducated'; this was not well received and Hendrie admits messages should include a *"positive spin"*.

5.5 Motivations Behind Rhino Horn Consumption

Two main factors have been identified as the roots drivers for consumption of rhino horn in Viet Nam: the desire to enhance one's own social status through the consumption of this luxury product, and to improve or maintain one's health. Messages to target either one of these need to be carefully developed (Michie *et al.*, 2011; Verissimo *et al.*, 2012, 2013) and must be consistent with cultural beliefs to avoid the risks of ineffective communication (Cramphorn, 2004; Duthie, 2014). Traditional medicine values and luxury consumption in Viet Nam must be understood accurately before exposing consumers to any messages.

5.5.1 Traditional Medicine

Rhino horn has been said to treat certain specific ailments as well as maintain good health (Milliken & Shaw, 2012). VTM in general helps keep the body's natural balances which is why it is incorporated into every day life (Nguyen *et al.,* 2008; Drury, 2009; Woerdenbag *et al.,* 2012). This is critical to take into consideration because it raises questions regarding messages that seek to address the myth that rhino horn can cure one specific type of ailment. As can be seen in ENV's TM survey (2011), the majority of the practitioners surveyed believe rhino horn detoxifies the body which contributes to maintaining the body's general health and balance (Woerdenbag *et al.,* 2012). If this is fully understood, it is harder to choose a single tag line that can challenge the belief that rhino horn has medicinal value.

Practitioners have been focusing on obtaining evidence that disproves rhino horn has medicinal properties all together. HSI and the CITES M.A are collaborating with scientists to provide reliable evidence to the public. As has been stated by both Teresa Telecky and Thuong Nguyen, from HSI and the CITES M.A. respectively, cancer patients who have purchased rhino horn are victims who have been tricked and must be helped (T. Nguyen (a), pers comm; T. Telecky, pers comm). This is where the issue of awareness raising comes in; while some rely on the assumption that providing information automatically changes people's behaviour, experts in studying behaviour change have actually demonstrated that it is not as simple (McKenzie-Mohr, 2000; Sayers, 2006; Drury, 2009; Smith & Strand, 2009). Considering that belief in the medicinal properties of rhino horn is part of the cultural beliefs behind VTM and not on a rumour, is tremendously important.

It is not surprising then, that those who are familiar with VTM and are considered experts, are not convinced by the messages that have been delivered by conservation organisations. Van Nguyen Dao Ngoc from WWF shared, *"When I talk to TM Professor of Ha Noi University and ask her to cooperate with us by talking to her students that rhino horn is just like human finger nails and has no medicinal value, she said: 'I don't believe you. I am a scientist, a Professor and I cannot tell my students what is not scientifically approved. I collaborate and agree that rhinos need to be conserved and protected but I don't believe your message.' Many TM practitioners don't believe in our campaign at all."* This anecdote shows a glimpse into what may be the reality for countless people who are exposed to campaigns against rhino horn use.

Teresa Telecky's claim that rhino horn is used for its medicinal purposes by people from *"all walks of life"* is supported by Drury's (2011) findings which show that animal-derived medicines are consumed by people from all social classes, despite their income and employment status. This serves to emphasise people's beliefs in the medicinal properties of these products, since even those patients who would not be expected to afford it find ways to obtain tonics for themselves or loved ones.

Traditional medicine, its remedies and theory have been a fundamental part of Vietnamese culture for centuries, and has been a source of national pride during several periods of the country's history. According to contemporary literature Woerdenbag et al. (2012) and

practitioner Dough Hendrie from ENV, these values will remain as an essential component of Vietnamese healthcare and culture. Messages that aim to address this, need to be particularly careful and consider this knowledge before delivering messages that directly contradict facts that are ingrained and supported by far more than just rumours.

5.5.2 Consumption of Luxury Products

As has been demonstrated earlier, consumption of luxury goods in Viet Nam, is vastly different from the Western world (Ho, 1976; Wong & Ahuvia, 1998). Shukla (2015) states luxury brands cannot use the same marketing strategies to advertise their products in Western and Eastern societies because of these differences. Similarly, attachment to and use of luxury products must also be studied and approached very carefully when attempting to influence behaviours. TRAFFIC's work with PSI in developing the Chi campaign shows an example of good practice in that both organisations collaborated to understand the deep drivers and motivations of wealthy individuals for consuming rhino horn. From their in-depth research they delivered four messages that speak to these motivations. Unlike many of the other campaigns launched, these messages do not include anything about conservation or protection of rhinos, demonstrating that this work has taken a completely new and innovative approach. Whether this is effective or not will be reported in the near future after the second measurements of consumption prevalence are recorded.

5.6 Evaluation Practices

The need to evaluate conservation interventions that include behaviour change is high given there is an urgency to act and limited funds must be spent wisely. Margolouis et al. (2009) suggest that a non-experimental evaluation design with pre and post testing is well suited for interventions that seek to measure a change in knowledge, attitudes and behaviours. To measure differences within a time frame, post-testing should also be done a certain time after the post-test. (Powers, 2004; Margolouis *et al.*, 2009). Studies can be done to survey how many people have been exposed to a particular message or advertisement and among those who have, identify what their consumption behaviour is for rhino horn or any other wildlife product (Ngo *et al.*, 2014).

Quantitative data measures the prevalence of a behaviour and qualitative approaches like in-depth interviews are crucial to understand what drives a person's behaviour towards an object or experience (Margolouis *et al.*, 2009). Lessons learned from the case study in Viet Nam show that research should be a priority to deliver effective messages to achieve behaviour change. Qualitative analysis such as self-report of impact of advertisement cannot be relied on entirely because individually, no one believes advertising has an effect on them (Braun-Latour & Zaltman, 2008). Therefore, qualitative analysis needs to be done so that researchers can tell whether the message has been internalised in the consumer's belief structure, which will have a much more lasting impact than if the consumer simply remembers an advertisement. One way to

achieve this is to ask a respondent's opinion on the matter and whether their answer contains elements of the advertisement that is being evaluated, it indicates that the messages have been internalised (Braun-Latour & Zaltman, 2008). This, according to Braun-Latour & Zaltman (2008) is when ultimate persuasion occurs and happens through a reconstructive memory process in which those exposed to an advertisement adopt the messages as their own memory. If there are no changes in opinion recorded, this would indicate that no internalisation has taken place and therefore that the advertisement has not had the effect desired. This could be attributed to the fact that the advertisement did not resonate enough with the consumer. This is only possible however, with pre and post testing evaluation (Powers, 2004; Margolouis *et al.*, 2009).

To make evaluation possible, determining the reduction of demand desired and the audience to test this in, is critical (Noordzij *et al.*, 2010). The power analyses conducted in this study demonstrate that having a large initial baseline is beneficial because the second sample size does not have to be as large to have a high probability of detecting the desired effect. This is advantageous since if conservation interventions are known to run out of funds before projects are completed. What must be taken into consideration as well, is that research studies that focus on detecting a reduction in demand need to measure the changes within a specific segment of the population. Therefore, identifying the target audience is essential to determine the sample size (Marcorr Research Solutions).

5.7 Baselines for the Future

Only three interventions have created baselines for prevalence of rhino horn consumption (TRAFFIC, HSI, WildAid/CHANGE), which is necessary to produce any evaluation (Brossard *et al.*, 2005; Ferraro & Pattanayak, 2006). Ideally, these already existing baselines could be used in the development of future campaigns. Although it was not possible to compare the questionnaires and raw data, each individual research study could be used as a baseline. HSI's work with Nielsen included questions only regarding use of rhino horn as a medicine; this study could be used as a baseline for people consuming rhino horn as a tonic/remedy. TRAFFIC's study, on the other hand, can serve as a baseline for consumption for enhancing social status.

In addition, TRAFFIC's qualitative information that describes motivations for consuming rhino horn, as well as WildAid's research done with Nielsen, describes the drivers behind consumption. This qualitative information can be used to compare reasons for consumption to understand consumption trends taking place in Viet Nam. The main problem with this however, is the lack of cooperation between those involved in this work. There is a lack of willingness to share results, to collaborate in research studies and to discuss approaches taken (T. Nguyen (b), pers comm). Organisations that have not been able to carry out research studies in Viet Nam, like Breaking the Brand and FREELAND, have made use of other research available and have applied the knowledge presented by TRAFFIC and PSI. Understandably though, organisations keep their raw data private. This has led to a lack of trust and results have been said to not be transparent enough. The situation is best described by FREELAND's representative, Phuong Hoang's comment on demand reduction in Viet Nam: *"It's a turf war."*

5.8 Applying Examples of Good Practice

A key next step conservation practitioners must take is to use the lessons from existing interventions and apply them to the development of new messages. Applying the Social Marketing Diamond (Appendix 2), which uses the BPM approach, can be an appropriate alternative to design effective messages (Nicholson & Xiao, 2011). Placing rhino horn consumption in this model has the potential of highlighting which perceptions, incentives and barriers need to be addressed and therefore what practitioners need to understand as best as possible. This can also help organisations determine what objective their specific messages are trying to accomplish; messages can remove incentives or promote barriers to discourage people from performing the undesired behaviour (Nicholson & Xiao, 2011).

The BPM proposes that consumer behaviour produces both utilitarian and informational consequences, which can either reinforce or punish a behaviour. Utilitarian are functional results from buying/using a product while informational are socially-derived and symbolic depending on the reactions of other people (Foxall *et al.*, 2006). The utilitarian and informational reinforcements and punishments depend on the purpose products are being used for. If rhino horn is used as a medicine, the utilitarian reinforcement clearly is the medicinal value. The utilitarian punishment is the high price of buying the product and whether there is an informational punishment is harder to determine. If rhino horn is being consumed to enhance or maintain one's social image, the informational reinforcement is clearly more important than the utilitarian reinforcement since owning it provides a symbolic value more than a functional one. In terms of punishments, the utilitarian is still be the price while the informational is again, more challenging to identify.

Applying the BPM to the consumption of rhino horn as a problematic behaviour that must be discouraged demonstrates that besides a high price, punishments are not clear at all. If these are hard to identify, it emphasises that practical and social reasons not to consume rhino horn either do not exist yet or are too weak to persuade current consumers. Breaking the Brand has sought to address this by developing messages around the negative impacts consuming rhino horn could pose to health and social status. WCS's approach has focused on increasing the barriers of consuming rhino horn by emphasising the utilitarian costs if people would actually be imprisoned.

The BPM and the Social Marketing Diamond help stress the importance of understanding consumers and their perceptions to develop messages that resonate with the target audience. In order to remove an incentive, practitioners must understand where the incentive comes from and what are the social norms that are currently reinforcing it. To be able to increase barriers against a particular behaviour, practitioners need to know what would be considered a real impediment to consume the product (Nicholson & Xiao, 2011). This requires in-depth consumer research to understand the behaviour fully (Cramphorn, 2004).

From the existing campaigns, lessons learned to develop messages have been illustrated in Figure 5.1. and although these have been summarised from the existing campaigns, future messages should be designed according to a behaviour change model.
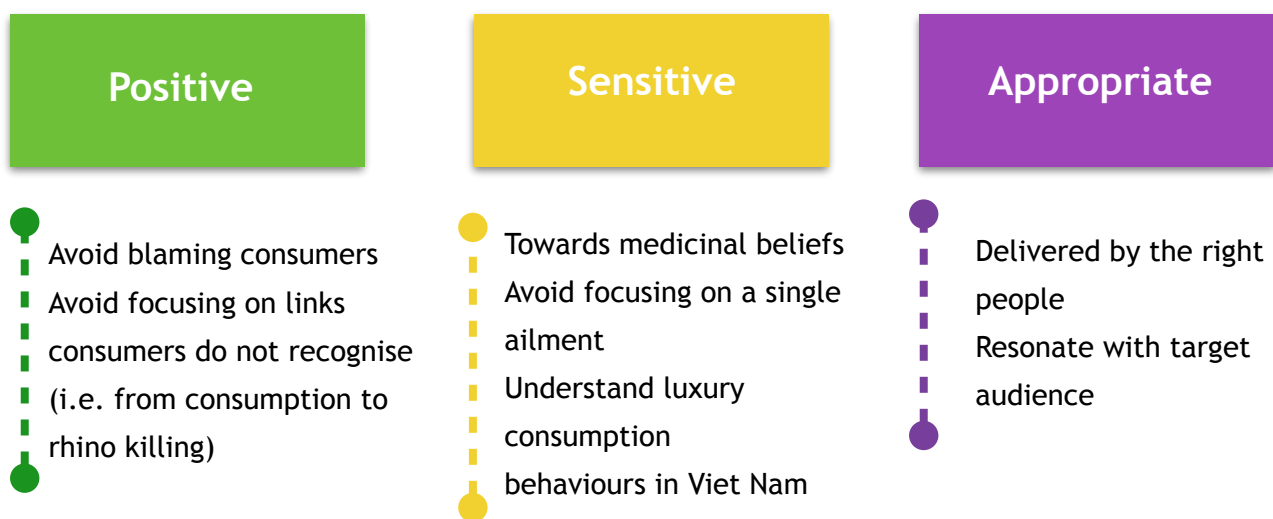
Positive	Sensitive	Appropriate
Avoid blaming consumers	Towards medicinal beliefs	Delivered by the right people
Avoid focusing on links consumers do not recognise (i.e. from consumption to rhino killing)	Avoid focusing on a single ailment	Resonate with target audience
	Understand luxury consumption behaviours in Viet Nam	

Figure 5.1 Lessons learned from existing campaigns to develop messages.

5.9 Future Research Studies

Other studies on the topic should include information regarding the Vietnamese government agency which is also carrying out work for demand reduction of rhino horn, the Biodiversity Conservation Agency under the Ministry of Natural Resources and Environment (MONROE). The BCA's input would be a valuable contribution to add to lessons learned for future interventions. Further analysis comparing the three different baselines (WildAid/CHANGE, HSI and TRAFFIC) could be useful to show evidence of results and measurement and to enhance collaboration between organisations. Furthermore, studies must be conducted urgently to understand the market for rhino horn in China (S. Roberton, pers comm).

5.9.1 Ivory

This study highlights that the ivory market in Viet Nam is poorly understood. There is agreement between WCS and WWF to avoid taking any course of action to address consumption of elephant ivory until the prevalence of the market and the motivations for purchase are identified (S. Roberton, pers comm; V. Nguyen Dao, pers comm). Cramphorn (2004) and Duthie (2014) would agree given that this will steer clear from interventions potentially having negative effects and raising the profile of a product that is currently not widely consumed. Even though evaluation with consumer behaviour interventions in Viet Nam has been lacking so far, lessons have been learned in this field and instances like the *"classic NGO mistake"* as Scott Roberton phrased it, can be avoided for ivory.

5.10 Recommendations for Practitioners

1. All interventions should determine measurable, achievable and timely objectives so evaluation can be possible

2. Any behaviour change intervention needs to be based on behaviour change models

3. All interventions expected to influence behaviour should have a previously determined theory of change including indicators

4. Indicators of success should not be confused with indicators of progress

5. Consider culture, values and beliefs as much as possible before developing any campaign

6. If an organisation does not have the skills or expertise to collect and analyse social data, or lead and monitor social marketing campaigns, partners who can do this accurately and transparently, such as academics, must be consulted

7. Find common ground in which to collaborate with other organisations to delegate research, development of messages and launching of campaigns to avoid lack of trust

8. Use lessons learned from other organisations' work (Figure 5.1)

9. Learn from experiences in other fields regarding how to use social marketing to achieve behaviour change

10. Do not assume behaviour change approaches that have worked in other countries can be applied successfully in Viet Nam

11. Work thoroughly on understanding the ivory market in Viet Nam before designing any intervention to target consumers

Behaviour change interventions are highly needed to address the threats illegal wildlife trade poses to biodiversity at a global scale. The interventions that aim to reduce rhino horn consumption have produced a framework to guide further efforts in Viet Nam and potentially other countries. Social marketing is new within the conservation sector and lessons learned from these interventions must be the foundation for future work. Only by using the knowledge that has already been gained can we increase the chances to successfully reduce demand for wildlife products, and advance work that applies behaviour change for the conservation of species and ecosystems.

References

Declaration. (2014) *London Conference on the Illegal Wildlife Trade. 12-13 February, London.*

Declaration. (2015) Kasane Conference on Illegal Wildlife Trade. *25 March, Kasane, Botswana.*

Memorandum of Understanding between the Government of the Socialist Republic of Viet Nam and the Government of the Republic of South Africa on Cooperation in Biodiversity Conservation and Protection. (2012) *10 December, Ha Noi, Viet Nam.*

Alaszewski, A. (2005) A Person-Centred Approach to Communicating Risk. *Plos Med.* 2 (2).

Ambler, T. (2000) Marketing Metrics. *Business Strategy Review.* 1-8.

Andreasen R., A. (1994) Social Marketing: Its Definition and Domain. *Journal of Public Policy & Marketing.* 13 (1), 108-114.

Balmford, A. & Cowling M., R. (2006) Fusion or Failure? The Future of Conservation Biology. *Conservation Biology.* 20 (3), 692-695.

Bates, A. & Bates, A. (2007) Lan Ong (Le Hu'u Trac, 1720-91) and the Vietnamese Medical Tradition. *Journal of Medical Biography.* 15, 158-164.

Beck, D. & Cowan, C. (2014) *Spiral Dynamics: Mastering Values, Leadership and Change.* Wiley.

Boyce, C. & Neale, P. (2006) *Conducting In-Depth Interviews: A Guide for Designing and Conducting In-Depth Interviews for Evaluation Input.* Pathfinder International.

Braun-Latour A., K. & Zaltman, G. (2008) Memory Change: an Intimate Measure of Persuasion. *Journal of Advertising Research.* 1-17.

Britt Henderson, S. (1969) Are So-called Successful Advertising Campaigns Really Successful? *Journal of Advertising Research.* 25-31.

Brossard, D., Lewenstein, B. & Bonney, R. (2005) Scientific Knowledge and Attitude Change: The Impact of a Citizen Science Project. *International Journal of Science Education.* 27 (9).

Campbell, R. (2013) *Horn of Contention: A review of literature on the economics of trade in rhino horn. Prepared for IFAW South Africa.* Melbourne, Australia, Economists at Large.

Challender, D. W. S. & MacMillan C, d. (2014) Poaching is more than an Enforcement Problem. *Conservation Letters.* 7 (5), 484-494.

Charmaz, K. (2006) *Constructing grounded theory: A practical guide through qualitative analysis.* Los Angeles, CA, Sage Publications.

Clayton, S. & Myers, G. (2009) *Conservation psychology: understanding and promoting human care for nature.* Oxford, United Kingdom, Wiley-Blackwell.

Courchamp, F., Angulo, E., Rivalan, P., Hall J., R., Signoret, L., Bull, L. & Meinard, Y. (2006) Rarity Value and Species Extinction: The Anthropogenic Allee Effect. *Plos Biology*. 4 (12), 415.

Cramphorn, S. (2004) What Advertising Testing Might Have Been, If We Had Only Known. *Journal of Advertising Research*. 1-12.

David Ogilvy Awards (2011). Case Studies

Department of Environmental Affairs Republic of South Africa. (2015) *Rhino Poaching Statistics Update*. [Online] Available from: https://www.environment.gov.za/projectsprogrammes/rhinodialogues/poaching_statistics#2015

Diogo Veríssimo, Daniel W.S. Challender, Vincent Nijman & Nguyen Van, T. (2012) **Wildlife trade in Asia: start with the consumer**. *Asian Journal of Conservation Biology*. 1 (2), 49.

Drury C., R. (2011) Hungry for success: Urban consumer demand for wild animal products in Vietnam. *Conservation and Society*. 9 (3), 247-57.

Drury C., R. (2009) *Identifying and Understanding Consumers of Wild Animal Products in Hanoi, Vietnam: Implications for Conservation Management*. Doctor of Philosophy. University College London.

Duthie, L. (2014) *Celebrities in Conservation: Are they a hindrance or a help?* MSc. Imperial College London.

Dworkin, L. S. (2012) Sample Size Policy for Qualitative Studies Using In-Depth Interviews. *Springer Science Business Media*.

Education for Nature Vietnam. (2011) *Rhino TCM Survey Summary Stats*. Survey. ENV.

Environmental Investigation Agency. (2013) *Poaching increases as SA pushes legal rhino horn trade*. [Online] Available from: https://eia-international.org/poaching-increases-as-sa-pushes-legal-rhino-horn-trade

Ewen G., J., Soorae S., P. & Canessa, S. (2014) Reintroduction objectives, decisions and outcomes: global perspectives from the herpetofauna. *Animal Conservation*. 17, 74-81.

Felbab-Brown, V. (2011) The Disappearing Act. The Illicit Trade in Wildlife in Asia. *Foreign Policy at Brookings*.

Ferraro J., P. & Pattanayak K., S. (2006) Money for Nothing? A Call for Empirical Evaluation of Biodiversity Conservation Investments. *Plos Biology*. 4 (4), 105-107.

Fishbein, M. & Ajzen, I. (1975) *Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research*. Addison-Wesley.

French, J., & Blair-Stevens, C. (2007). *The social marketing big pocket guide*. London: National Social Marketing Centre.

Foxall R., G., Oliveira-Castro M., J., James K., V., Yani-de-Soriano, M. & Sigurdsson, V. (2006) Consumer Behavior Analysis and Social Marketing: The Case of Environmental Conservation. *Behavior and Social Issues*. 15, 101-124.

Gao, Y. & Clark G., S. (2014) Elephant Ivory Trade in China: Trends and Drivers. *Biological Conservation*. 180, 1-8.

Geller E., S. (1981) Evaluating energy conservation programs: Is verbal report enough? *Journal of Consumer Research*. 8, 331-335.

Geller E., S., Erickson, J. B. & Buttram, B. A. (1983) Attempts to promote residential water conservation with educational, behavioral and engineering strategies. *Population and Environment Behavioral and Social Issues*. 6, 96-112.

Glaser, B. (1978) *Theoretical sensitivity: Advances in methodology of grounded theory*. San Francisco, CA, University of California Press.

Hall J., R. & Milner-Gulland, EJ & Courchamp, F. (2008) Endangering the endangered: The effects of perceived rarity on species exploitation. *Conservation Letters*. 1 (2), 75-81.

Harrison, R., Newholm T. & Shaw, D. (2005) *The ethical consumer*. London, United Kingdom, SAGE Publications.

Ho Yau-fai, D. (1976) On the Concept of Face. *American Journal of Sociology*. 81 (4), 867-884.

Humane Society International (2014) *Viet Nam Rhino Horn Demand Reduction Campaign*. Demand for Rhino Horn Reduced, Says Poll. Humane Society International, Viet Nam CITES M.A.

Hussein El, M., Hirst, S., Salyers, V. & Osuji, J. (2014) Using Grounded Theory as a Method of Inquiry: Advantages and Disadvantages. *The Qualitative Report*. 19 (27).

Ipsos Marketing. (2013) *Consumer Research on Rhino Horn Usage in Vietnam. Qualitative and Quantitative Report*. Ipsos Marketing.

Johnson, L. (2014) *Breaking the Brand of Rhino Horn in Viet Nam. The First 12 Months*. Breaking the Brand

Jones C., S., Iverson C., D., Penman, A. & Tang, A. (2005) A practical application of theory: using social marketing theory to develop innovative and comprehensive sun protection campaigns. *Faculty of Health and Behaviour Sciences*. 1-8.

Macorr Research Solutions. (2003-2015) *Sample Size Methodology*. [Online] Available from: http://www.macorr.com/sample-size-methodology.htm

Margoluis, R., Stem, C., Salafsky, N. & Brown, M. (2009) Design Alternatives for Evaluating the Impact of Conservation Projects. *New Directions for Evaluation*. 85-96.

Markus H, R. & Kitayama, S. (1991) Culture and the self: Implications for cognition, emotion and motivation. *Psychological Review*. 98 (2), 224-253.

Mckenzie-Mohr, D. (2000) Promoting Sustainable Behavior: An Introduction to Community-Based Social Marketing. *Journal of Social Issues*. 56 (3), 543-554.

Michie, S., van Stralen M, M. & West, R. (2011) The Behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*. 6 (1), 42- 53.

Milliken, T. (2014) *Illegal Trade in Ivory and Rhino Horn: An Assessment to Improve Law Enforcement Under The Wildlife Traps Project*. Cambridge, United Kingdom, TRAFFIC International.

Milliken, T. & Shaw, J. (2012) *The South Africa - Viet Nam Rhino Horn Trade Nexus: A deadly combination of institutional lapses, corrupt wildlife industry professionals and Asian crime syndicates.* TRAFFIC.

Milman, O. (2014) *Rhino horn demand in Vietnam drops by more than 33% in one year*. The Guardian. [Online] Available from: http://www.theguardian.com/environment/2014/oct/16/rhino-horn-demand-in-vietnam-drops-by-more-than-33-in-one-year

Nash V., S. (1997) *Fin, feather, scale and skin: Observations on the wildlife trade in Lao PDR and Vietnam.* Petaling Jaya, Malaysia, TRAFFIC Southeast Asia.

Ngo, H., Nguyen, M., Mundy, G. & Dinh, C. (2014) *Association between Exposure to Social Marketing and HIV Prevention Behaviors among MSM in Vietnam*. Public Services International. Vietnam.

Nguyen Dao, N. V. & Nguyen, T. (2008) *An Overview of the use of Plants and Animals in Traditional Medicine Systems in Viet Nam*. Ha Noi, Viet Nam, TRAFFIC Southeast Asia.

Nguyen Duong, M. (2005) Culture Shock — A Review of Vietnamese Culture and Its Concepts of Health and Disease. *The Western Journal of Medicine*. 1-4.

Nicholson, M. & Xiao Hong, S. (2011) Consumer behaviour analysis and social marketing practice. *The Service Industries Journal*. 31 (1).

Nijman, V. (2009) An Overview of International Wildlife Trade from Southeast Asia. *Biodiversity Conservation*. 19 (4), 1101-1114.

Noordzij, M., Tripepi, G., Dekker, W. F., Zoccali, C., Tanck, W. M. & Jager, J. K. (2010) Sample size calculations: basic principles and common pitfalls. *Nephrology Dialysis Transplantation*. 1-6.

NSMC. *Social Marketing Benchmark Criteria*. [Online] Available from: http://www.thensmc.com/sites/default/files/benchmark-criteria-090910.pdf

Person L., E., Lowry, R., Dorrian, J. & Litchfield A., C. (2014) Evaluating the conservation impact of an innovative zoo-based educational campaign: 'Don't Palm Us Off' for Orangutan Conservation. *Zoo Biology*. 33 (3), 184-196.

Pharm, D. & Bodeker, G. (2001) Tue Tinh: Founder of Vietnamese Traditional Medicine. *The Journal of Alternative and Complementary Medicine*. 7 (5), 401-403.

Powers L., A. (2004) Evaluation of One and Two-Day Forestry Field Programs for Elementary School Children. *Applied Environmental Education and Communications*. 3 (1), 39-46.

Raymond, C. & Knight, A. (2013) Applying Social Research techniques to improve the effectiveness of conservation planning. *Bioscience*. (8-10).

Roe, D., Mulliken, T., Milledge, S., Mremi, J., Mosha, S. & Grieg-Gran, M. (2002) *Making a Killing or Making a Living? Wildlife Trade, Trade Controls and Rural Livelihoods.* Biodiversity and Livelihoods. London, UK, International Institute for Environment and Development.

Rogers M., E. (1995) *Diffusion of Innovations.* 4th edition. New York, United States, Free Press.

Rothschild, M. (2008) Separating Products and Behaviors. *Social Marketing Quarterly.* 14 (4).

Sayers, R. (2006) *Principles of Awareness-Raising for Information Literacy, a case study.* (c) UNESCO.

Sharif, V. (2014) *Analysis of conservation initiatives aimed at reducing demand for traded wildlife in China and Vietnam.* Stop Ivory & The Royal Foundation.

Shukla, P. (2015) Consumers in Asia buy Luxuries for different reasons to the West. *The Conversation.* Weblog. [Online] Available from: https://theconversation.com/consumers-in-asia-buy-luxuries-for-different-reasons-to-the-west-45069

Smith A., W. & Strand, J. (2009) *Social Marketing Behavior. A Practical Resource for Social Change Professionals.*

Stem, C. (2007) Using Results Chains to Improve Strategy Effectiveness. *Foundation of Success.*

Stewart W, D. & Hess, M. (2011) How Relevancy, Use and Impact Can Inform Decision Making. *Journal of Advertising Research.* 195-204.

Sutherland J., W., Pullin S., A., Dolman M., P. & Knight M., T. (2004) The Need for Evidence-Based Conservation. *Trends in Ecology & Evolution.* 19 (6), 305-308.

To Nguyen Thi, Hai Anh. (2011) *Luxury Market in Vietnam.* MBA. ISC Paris.

TRAFFIC. (2013a) *Shutting Down the Rhino Horn Trade.* TRAFFIC. Ha Noi, Viet Nam.

TRAFFIC. (2013b) *Rhino horn consumers - who are they?* TRAFFIC GMP. Ha Noi, Viet Nam.

Tyme, L. A. (2001) *Student Manual on the Fundamentals of Traditional Oriental Medicine.* 4th edition. California, United States, Living Earth Enterprises.

Underwood M., F., Burn W., R. & Milliken, T. (2013) Dissecting the Illegal Ivory Trade: An Analysis of Ivory Seizures Data. *Plos Biology.* 8 (10), 1-12.

United Nations International Drug Control Programme. (2000) Demand Reduction. A Glossary of Terms.

Verissimo, D., Challander W.S., D. & Nijman, V. (2012) Wildlife Trade in Asia: Start with the Consumer. *Asian Journal of Conservation Biology.* 1 (2), 49-50.

Verissimo, D., Fraser, I., Girao, W., Campos A., A., Smith J., R. & MacMillan C., D. (2013) Evaluating Conservation Flagships and Flagship Fleets. *Conservation Letters.* 7 (3), 263-270.

Vlek, C. (2000) Essential Psychology for Environmental Policy Making. *International Journal of Psychology*. 35 (2), 153 - 167.

WARC 100 (2014). *The world's smartest household goods campaigns and companies*

Wilkie L., W. & Moore S., E. (2003) Scholarly Research in Marketing: Exploring the "4 Eras" of Thought Development. *Journal of Public Policy & Marketing*. 1-32.

Woerdenbag J., H., Nguyen Manh, T., Vu Van, D., Nguyen Tuan, D., Thanh Van, T., Smet De, P. & Brouwers, J. (2012) Vietnamese Traditional Medicine from a Pharmacist's Perspective. *Expert Review of Clinical Pharmacology*. 5 (4), 459-477.

Wong Y., N. & Ahuvia C., A. (1998) Personal Taste and Family Face: Luxury Consumption in Confucian and Western Societies. *Psychology & Marketing*. 15 (5), 423-441.

APPENDIX 1

Briefing: Reducing demand for illegal wildlife products project

Defra Research Project WC1110

Summary

Defra have commissioned a consortium involving WWF-UK, TRAFFIC and Imperial College London (Business School and Department of Life Sciences) to undertake a research project to support action to reduce demand for illegal wildlife products. The aim of the project is to improve understanding of the most effective interventions to reduce demand for illegal wildlife products and produce tools and guidance to support governments, non-government organisations (NGOs) and others in developing their campaigns. This will help to ensure that future policy interventions and initiatives to raise awareness and influence behaviour are as targeted and effective (and cost effective) as they can be, and thus have greatest impact. The project began in December 2014 and will last one year. Other experts on behavioural change will be engaged in the project to provide their expertise in this area and to contribute to the learning through this project.

Background

The UK Government is committed to ending the illegal wildlife trade. Reducing demand for illegal wildlife products such as elephant ivory and rhino horn is one of the key elements of policy to help achieve this. The Declaration agreed at the London Conference on the Illegal Wildlife Trade recognises that the trade can only be effectively tackled if both the demand and supply side are addressed. Actions agreed and included in the Declaration include supporting and undertaking effectively targeted actions to eradicate demand, including but not limited to raising awareness and changing behaviour. The Declaration states that actions should be evidence based, building on research into users' values and behaviours. This project, commissioned by Defra, will help provide that evidence base.

Overview

The project will review existing evidence and experience of demand reduction initiatives, including behavioural change initiatives focused on topics beyond conservation and undertake targeted new research to provide greater insight into the attitudes, values and motivations driving demand for illegal wildlife products in market States. The project will focus on reducing demand for elephant ivory and rhino horn in China, Thailand and Vietnam (subject to findings from a scoping exercise at the beginning of the project), and will be tailored in response to the needs of NGOs, government representatives and others working on these issues.

The study will link closely with work to reduce demand for tiger products currently being undertaken by TRAFFIC as part of the Global Tiger Recovery Program (GTRP), endorsed by all 13 Tiger range countries at the 'Tiger Summit' held in St Petersburg in 2010.

The project outputs include: an initial scoping study; stakeholder engagement and advocacy plans; an evidence and literature review; targeted primary research with key consumer groups; a workshop to engage experts to share knowledge and help in the development of recommendations; a research report including recommendations for effective demand reduction campaigns; a set of tools that can be used by others to help deliver effective / quality assure measurable changes in consumer behaviour; and recommendations for further policy, delivery and evidence in this area.

Objectives

1. To undertake a **scoping exercise** to take stock of existing evidence building upon TRAFFIC's background paper produced for a 2011 'Creative Experts' meeting in Hong Kong, as well as the independent study by Imperial College's researcher Vian Sharif, and additional data sources, especially those originating from within Asia. The scoping exercise will examine options for the full study.

2. To undertake an **evidence and literature review**, to inform understanding of target audiences and behaviours and possible approaches to reduce demand for illegal wildlife products. This will include evidence and literature regarding other products and from other policy areas not immediately related to the illegal wildlife trade to learn lessons from other effective awareness-raising and behaviour change interventions. It will draw from Chinese, Thai and Vietnamese language literature, including academic research literature, wherever possible.

3. To **engage creative experts** in the evidence review, potentially including those working in NGOs, 'Think Tanks', research institutions and academia, media, marketing, advertising, business management consultancies and PR, government representatives, the CITES Standing Committee Working Group on Rhinoceroses, and other relevant groups and leading experts, so that the evidence review as a whole can assess a wide range of academic and practical expertise. As above, this will involve experts with knowledge of successful demand reduction regarding other products and from other policy areas

4. Through the scoping exercise and evidence and literature review, and engagement with key NGOs, government representatives and other stakeholders, to develop a **stakeholder engagement plan** and subsequent advocacy strategy in order to inform and engage groups who might be engaged in this review process and in subsequent project activities. Subsequent project activities could include advocacy to secure concrete action towards demand reduction action from government and corporate actors in particular. The stakeholder groups already envisioned are governmental agencies, corporate sector, advertising, marketing and social research companies, academic and research organisations, and civil society.

5. To identify potential gaps in the understanding of behavioural change in reducing demand for illegal wildlife products. This process will thus inform the design of **targeted primary research** to be conducted by Imperial College London, co-created with WWF and TRAFFIC. The aim of this research will be to utilise particularly promising social and market research methods and approaches identified within the scoping study. This approach will provide evidence in relation to the use of qualitative and/or quantitative methods, some of which are likely to be new and innovative in the conservation sector, which could be conducted for further key consumer groups identified as currently neglected.

6. Following this, analysis will then be conducted of all the work in the project to this point, in order to inform the **development of recommendations** for a package of coordinated, evidence-based interventions to be delivered over the next four to five years, and evaluation to assess the success of strategies and approaches to influence behaviour. This element of the Consortium's approach will be delivered through a **workshop.** Discussion during the workshop will be informed by a research report and interactive web portal that will compile the information gathered through this work, presented as a project 'tool'. The outcomes of the workshop will similarly be distributed as a report and made available on a web portal.

7. The consortium will use discussion during this workshop to inform the development of a **series of recommendations for campaigns** aimed at reducing consumption of elephant and rhino products. These recommendations will feature in the **final project report,** and include a summary of the outputs of the workshop. Through this report, the consortium will seek to confirm specific consumer behavioural change goals and identify a selection of multi-dimensional strategies for achieving them and reducing demand.
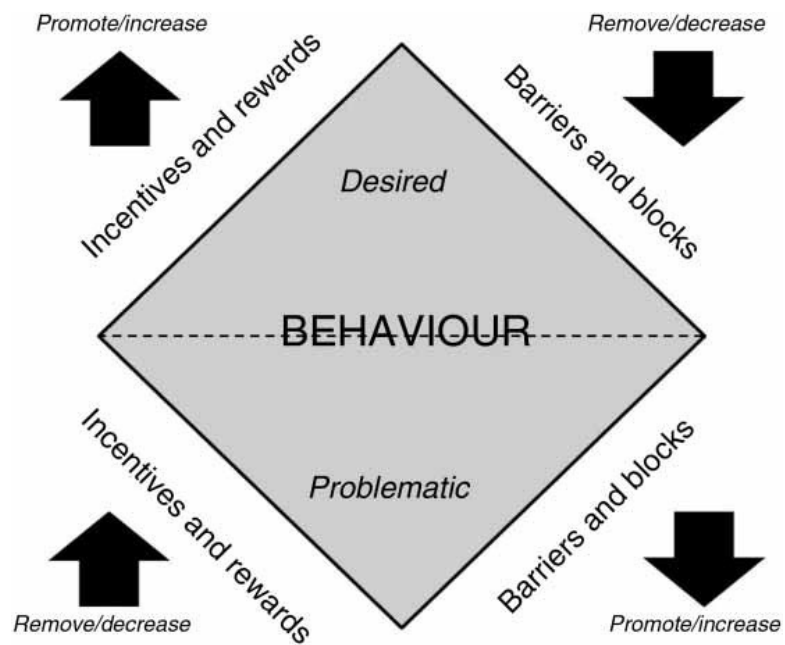

Contacts:

Heather Sohl
Chief Adviser, Species
Science and Policy Team, WWF-UK
01483 412595
HSohl@wwf.org.uk

Simon Maxwell
Social Research Adviser
Biodiversity and Ecosystems Evidence and Analysis, Defra
020 7238 5325
Simon.Maxwell@defra.gsi.gov.uk

APPENDIX 2

Social Marketing Diamond

(French & Blair-Stevens, 2007)

APPENDIX 3

Conversations with practitioners

Chau, Nhi. Program Development Coordinator, CHANGE. (Personal Communication 5th June 2015)

Hendrie, Doug & Nguyen, Dung. Chief Technical Advisor and Vice Director, Education for Nature - Vietnam. (Personal Communication 2nd June 2015)

Hoang, Phuong. Project Coordinator, FREELAND. (Personal Communication 1st June 2015)

Johnson, Lynn. Founder, Breaking the Brand. (Personal Communication via Skype 4th June 2015)

Nguyen Dao, Van. Project Manager, WWF - Vietnam. (Personal Communication 12th June 2015)

Nguyen Thuong (a). International Cooperation Official and Coordinator for Rhino Horn Demand Reduction Campaign, CITES M.A. (Personal Communication, 4th June 2015)

Nguyen, Trang (b) . Founder, Wild Act (Personal Communication via Skype, 8th June 2015)
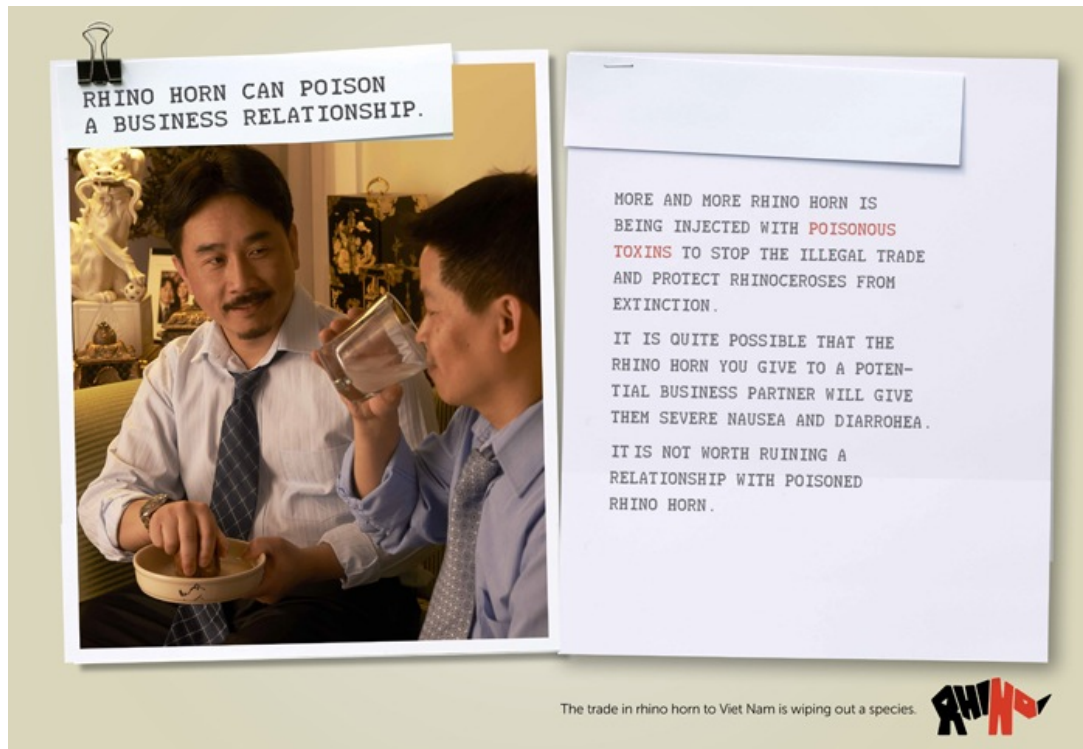
Nguyen, Trinh (c) & Capotosto, Jill. Demand Reduction and Communications Officer, TRAFFIC SEA - GMP. (Personal Communication 2nd June 2015)

Roberton, Scott; Hoang, Thuy & Pham, Ha. Program Coordinator, Program Manager & Policy & Comms Coordinator. Wildlife Conservation Society. (Personal Communication 15th June 2015)

Telecky, Teresa. Wildlife Department Director, Humane Society International. (Personal Communication 15th June 2015)

APPENDIX 4

Breaking the Brand's campaign messages:

APPENDIX 5

TRAFFIC's Chi campaign messages:

MASCULINITY COMES FROM WITHIN

" A man's allure and charisma come from within, not from a piece of horn. "
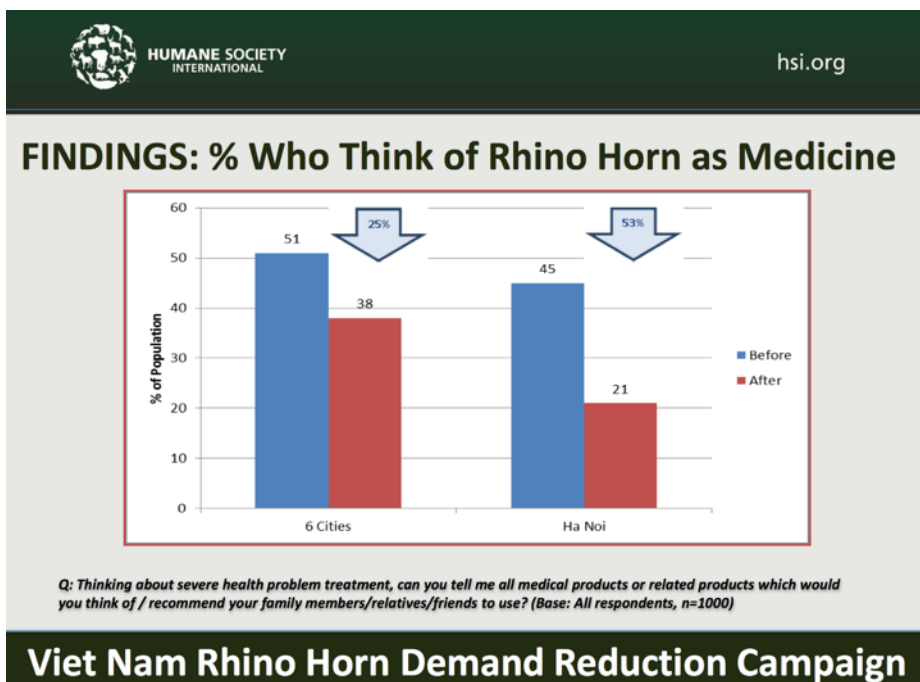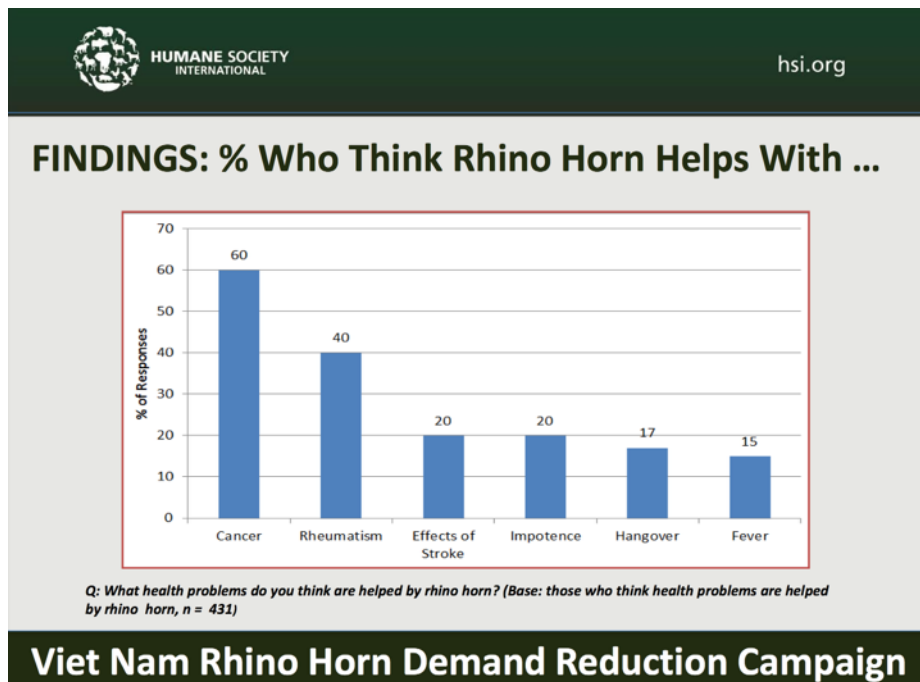

SPIRITUALITY COMES FROM WITHIN

" Good luck comes in many forms. Health. Success. Respect. The lucky man knows that the tallest towers rise from the ground not from a piece of horn. "

APPENDIX 6

HSI's results published in 2014: