

USING VIABLE SYSTEM MODEL FOR CHINESE OUTBOUND TOURIST MARKET SUSTAINABILITY

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ABSTRACT

Tourism industry benefited worldwide economy providing services to Chinese Tourists who traveled to foreign in 2014 generating income by 165 billion dollars and accounting for 13% of international tourism. Realizing this market's acquisition means growth opportunities for destinations; as well as the added difficulty in services nature of being unsteady, improvable and involving many factors. This article reaches the assembling of chinese outbound tourism market sustainability through the premise of a different perspective for conceptualizing, designing and delivering tourism services as part of a whole socio-ecological system; and sets out a reflection on sustainable responses to some emergencies derived from the increasing tourist activity of the chinese outbound market system.

As examples of a problematic situation are augmenting infrastructure demand, transport and public services in peak season that exceeding load capacity generates negative results for residents and tourists; repercussions on wildlife by large tourist flows during critical moments of migration, breeding or rearing; impacts on local cultures due to the encounter between contrasting lifestyles.

Therefore, the opportunity to expand choices grounded on the convenience of systemic approach for sustainable tourism study and decision-making. The outcome is the Chinese Outbound Market System diagnosis and teleology, the determination of recursive levels, interrelations and conflicts; as well as the systemic integration between it's elements using Viable System Model to configure a holistic construct composed of relevant subsystems oriented to viability and sustainability.

It is concluded that tourism planning that omits sustainable character, reduces benefits severely with consequences not only ecologically harmful, but also economically self-destructive. In that way it could be possible to confront currently systemic socio-ecological issues.

Keywords: Sustainability System, Emergence, VSM, Chinese Outbound Tourism Market

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INTRODUCTION

Context is given by tourism contributing to economic progress with 1133 million international arrivals and 1245 billion dollars income in 2014 (WTO, 2015). Specifically Chinese outbound market will reach 1.8 billion arrivals for 2030 (WTO, 2015); and emergent destinations are estimated to increase reception 4.4% annually representing a 57% market share for 2030 (WTO, 2015). For 2014 Chinese tourists generated 165 billion dollars income and accounted 13% of international tourism; now many destinations are interested to make incursion on this potential market (WTO, 2015).

That tendency brings out the thought that tourism destinations must foresee not only economic progress but also its viable and sustainable character.

Around Chinese outbound market literature review the imperative of approaches that exceed qualitative contribution of understanding as market, observable in works of Kwek, Wang and Weaver (2014); Lai, Xiang and Harrill (2013); Li, Zhang, Mao and Deng (2011); Li, Lai, Harrill, Kline and Wang (2011); Li, Harrill, Uysal, Burnett and Zhan (2010); Wang and Ap (2013); Salazar and Zhang (2013); Wan (2013) or in Shengnan and Dallen (2015) is emphasized; as well as their motivational reading using Canonical Correlation made by Li, Meng, Uysal and Mihalik (2013). Therefore the relevance of systemic character such as in precedents of Desheng (2012); Chaoqun, Lan, Junbo and Jing (2012); Lu, Hao and Wang (2009); Watts (2009); Zhu (2010); or Hsiang-Ju, Yuan-Hui, Shen-Ho and Kuo-Hsiung (2010).

Soft Systems Methodology Approach

Agreeing with Ramírez (2015) about environmental problems coming from a complex social scenario and because the perceived demand to considerate heterogeneous components involved and interrelations, Soft Systems Methodology (Checkland, 1994) is the guideline for this paper on the basis provided by Jackson and Keys (1985) its appropriateness is complemented with Viable System Model (Beer 1979,1981,1985); to support the definition of a topology for the evolution of the overall system. That is conducive to the need of explanations aimed at all; matching idea of a totalizer tourism treatment (Jafari, 2005).

Using Soft Systems Methodology (Checkland, 1994) Chinese Outbound Market as International Tourism Offer Consumer System was diagnosed considering sustainability as response to some of its emergencies.

By its growing activity Chinese Outbound Market as International Tourism Offer Consumer is constituted by deliberate actions and implies certain emergent attributes. It is defined from tourism activity mainly motivated by nature and culture oriented experiences (Yun and Joppe 2011).

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The Synthesis was conducted as follows:

Stage 1 Recursive levels of problematic situation were determined and described. (Checkland, 1994).

Stage 2 Synthesis of information to establish interrelations and conflicts (Figure 1).

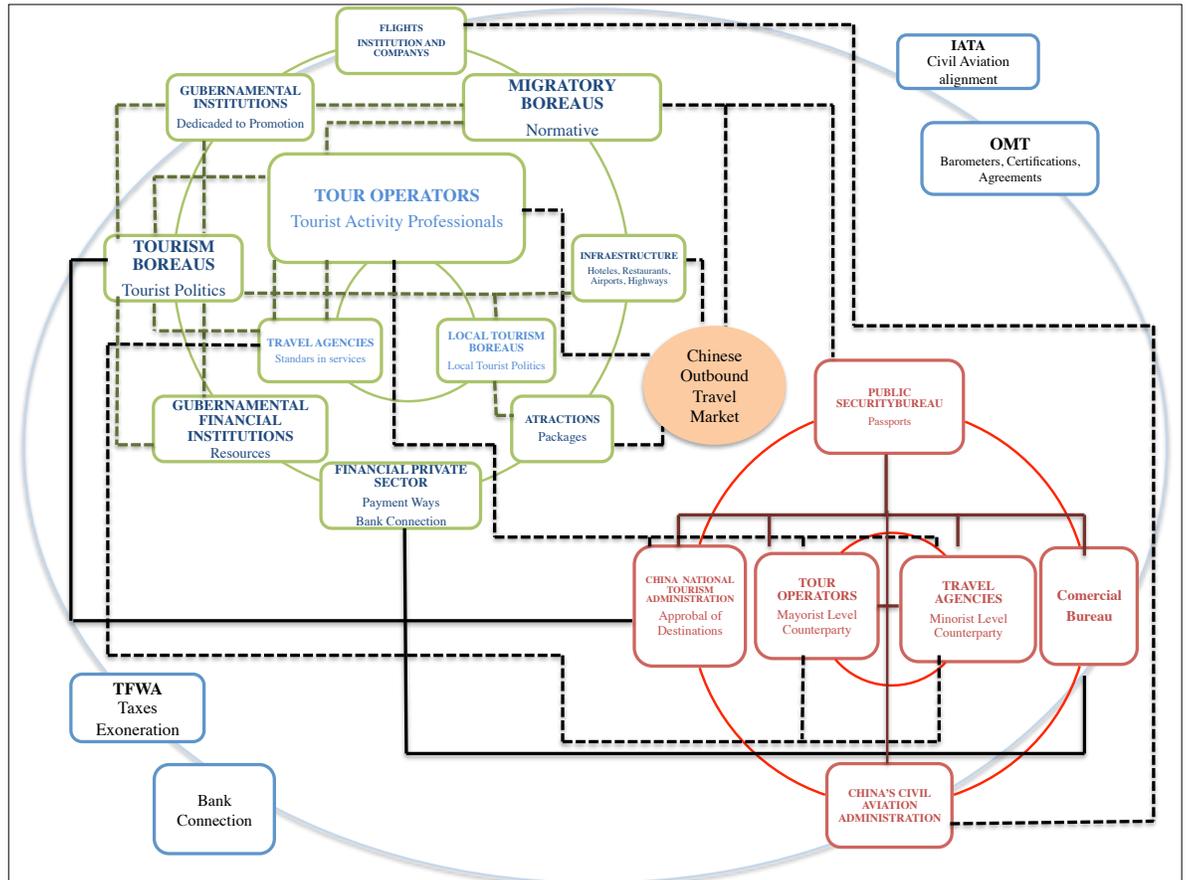


Figure 1. Rich Picture of the Problem

Based on Checkland's Soft Systems Methodology (1994)

-  International elements that have an indirect relation and do not represent conflicts for the problematic situation.
-  National and Local elements from destinations directly related to the problematic situation.
-  China's National and Local elements directly related to the problematic situation.
-  Direct and not conflicting interrelations between elements belonging to the National and Local levels in China and Destinations.
-  Direct and conflicting interrelations between elements belonging to the National and Local levels both in Destinations and China
-  Direct and conflicting interrelations between elements belonging to the National and Local level in Destinations
-  Direct and non-disruptive interrelations between elements belonging to the National and Local levels in China.

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Stage 3 Abduction process based on secondary sources and researchers expertise to determine relevant systems and their definitions which certainty was verified by CATWOE analysis to add points of view that make activities significant in the performance of the overall system.

From **Stage 4** where model design starts, soft systems methodology was complemented with Viable System Model tool (Beer, 1979, 1981, 1985); to support the definition of a topology for the evolution of the overall system.

Sustainability Considerations

Sonaglio and Da Silva (2009) pointed out that if tourism administrators prioritize focusing on visitors number, they promote strong consumerism and disorderly territory occupation that globalizes, depersonalizes and strengthens negative impacts on host society and natural environment. So this article concerns if it is possible to contribute tourism development considering sustainability in response to some of the emergencies implied in the increasing tourist activity of the Chinese Outbound Market.

Anticipating the synthesis of a sustainable character seeing that when tourist flows get overcrowded, sustainability is essential to confront challenges and ensure economic benefit without compromising nature and culture.

Precedents of sustainable thinking recognize “sustainable development as meeting needs of present generation, without compromising the ability of future generations to meet their own needs” (UN, 1987).

WTO on 1999 says that sustainable tourism responds to the needs of tourists and host regions while protects and improves future opportunities. Managing resources to meet economic, social and esthetic needs; simultaneously respecting cultural integrity, ecological processes and biological diversity.

Fernandes et al. (2012) affirm humanity future dependent on the relation between man and nature where tourism requires available natural resources that must be kept. Accordingly WTO (1999) sustainable tourism principles:

- Natural and cultural resources are preserved for their continued usage
- Tourism development is planned not to cause environmental or socio-cultural problems
- Environmental quality is maintained and improved
- Visitor satisfaction, prestige and commercial potential is procured
- Benefits are distributed between the society

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Sustainable tourism Charter (1995) enunciates:

- Suppliers must offer quality and respect guarantees for human rights and environment
- Natural resources usage has to be moderate
- Minimize waste generation
- In sensitive ecosystems, cause the least impact
- Favour local economy
- Respect culture, gastronomy and traditions

With such precedents systemic appropriateness to consider sustainable attributes to attend emergencies, keeping balance between negative entropy from the problem situation; and it's counterpart of positive entropy from the environment.

Adding to the proper utilization of resources contributing to social, economic, cultural and environmental behavior. Considering that business scene has changed, as other factors in addition to the financial are involved in development issues; becoming aware of the risk in terms of resources, and generating actions that counteract a possible lack of them. González and González (2010) pointed out trade liberalization effects, with the impact of hotels and restaurants, transport, storage, communications and water as four economic activities that show the biggest costs for environmental degradation.

Regarding emissions that contribute to climate change, and tourism having strong impacts on destinations there are measurements (Amelung and Viner, 2006, Amelung et al. 2007, Moen and Friedman 2007 in Ramirez et al. 2011), and methods that have been developed such as the ecological footprint, whose importance is clear in the conclusion that from all tourist activities, travelling by air are is the most pernicious (Peeters and Schouten, 2006, Ramírez et al. 2011). Also the unrealistic for a resort or country according to Liu (2003 in Castillo and De Medina, 2014) of assuming an ever increasing demand, ignoring tourist market changes, or even phenomena with affecting capability in different scales such as a financial or health crisis.

Returning to nature motivations of the Chinese Market, affectations are related to hiking practices and alternative tourism, where load capacity is essential to considerate; as well as to prevent transcendence that currently China is the main carbon monoxide emitter in the world. As counterpart Gerritsen and Gutierrez (2009) promote sustainable rural tourism with landscape maintenance, natural and cultural heritage protection, as well as food quality increase with multifunctional agriculture.

Considering urban vulnerability that Zevenbergen et al. (2008 in Ramirez et al. 2011), expose as planning the assimilation and dispersion of people concentration impact and economic activities, to avoid large-scale disasters, when integrated approaches for interactions between spatial scales are required, that El-Masri and Tipple in Ramírez et al. (2011) referred as " disaster impacts pyramid ".

In cultural dimension sustainable tourism relation is observed from the valuation of cultural heritage, and heritage conservation as well as pride of the ethnic group by local community (Ruschmann 2002, Dias and Silveira 2003 in Fernandes et al, 2012).

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In planning and sustainable tourism organisation in urban areas are taken into account dimensions, structure and function (as dynamic); the urban environmental comfort (represented by basic infrastructure, support and touristic) that should prioritize usage for local community.

Contrasting with what is seeing in practice, where space is ordered according to tourists pretensions, leaving host population apart from it's usage (Sonaglio and Da Silva, 2009). Similarly Suarez et al. (2013) see regional development model determined by exogenous context based on models that generate social exclusion, regional contrasts and polarization, resulting in antagonism and economic instability, social unequity and environmental degradation for rural communities.

RESULTS

Diagnosis

The state that the system keeps is detailed by pointing out relevant observable relations that generate emergency patterns making congruent on what Jafari (2005) defines as the best preparation for the different direction tasks and senior management in the private and public sectors of tourism; as well as in it's approach commensurate with the systemic perspective of a detailed view that allows understanding, as a whole of the various sectors of the tourism industry, their interrelation; changes and market trends; as well as their connection with the socio-political agents that shape and regulate tourist activity.

Consequently Teleology is determined as a final state on tourism development with sustainable responses for an increasing tourist activity.

In that way inflection points were found as opportunities to improve by means of sustainability leading an evolution of the overall system. From a framework that considers different needs, therefore the imperative of attributes that mitigate environmental impacts, and lead to viable sustainability through needs satisfaction of communities, tourists and those who operate touristic businesses. This sustainability criteria is specified in Table 1.

Table 1. Correspondence between Sustainable Attributes and Emergencies of Chinese Outbound Tourist Market Consumption

<i>Element interrelated with tourist activity of Chinese Outbound Market</i>	<i>Interrelation assessment</i>	<i>Emergent aspect</i>	<i>Sustainable attribute as response</i>
WTO World Tourism Organization	Indirect Not conflictive	Tourist activity monitoring between destination and outbound market	Promoting sustainable participation between destinations through agreements and certifications
IATA International Air Transport Association	Indirect Not conflictive	Increased demand of flights logistics	Control criteria implementation to not exceed capacity on air routes
Flight Institutions and or Cpmpanies	Indirect Not conflictive	Addressing legal framework, international representation and air competition, to consolidate the flights operation.	Ensure connectivity incorporating flight companies in a framework to ensure security and respect for human rights.
CAAC China's Civil Aviation Administration	Indirect Not conflictive	Regulations on connectivity for civil aviation between China and Destinations.	Programming Chinese Airlines such as Cathay Pacific and Hainan Airlines to estimate flights demand, hours appropriateness to not exceeding capacity on air routes.

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Destination Tourism Bureau	Direct Conflictive	Management discernment for this market potential	<p>Government policies and strategies that promote social welfare and strengthen capacities of the receiving communities. To get favorable conditions in socioeconomic receiver space that ensures all development increases living standard of the habitants, that is compatible with their socio-cultural values and to keep and strengthen communities identity.</p> <p>Add binational tourism memorandums of understanding and partnership, with sustainability as strength to gain market confidence.</p> <p>Plan and monitor services to mitigate adverse effects, involving environmental, technical, economic and social aspects. A solid tourism project, which regulates, controls and designs its operations based on fault detection and its recurrence in subjects as increase in infrastructure demand, transport and public services, as well as impacts on wildlife and culture.</p>
Gubernamental Institutions dedicated to Promotion	Direct conflictive	<p>Products and destinations Promotion on Chinese market</p> <p>Needing broadcasting strategies as well as complementarity actions</p>	<p>Ecological preservation rethinking relation between man-nature, planning, legislation and regulations that ensure preservation and rational exploitation of resources.</p> <p>Deepen knowledge of Chinese market tourist motivations and customs to be considered in tourism products design and interaction scenarios that minimize cultural impact on receiving communities and visitors.</p> <p>Preservation of cultural heritage through respect environment promotion that ensures continuity in people identity that in systemic language is the teleology of the system or its identity.</p>
Gubernamental Financial Institutions	Direct Conflictive	Financial resources allocation for tourism development	<p>Prioritize costs allocating resources under incidence principles; whether in ambiental-turistic or cultural-turistic, or educacional-turistic-environmental levels. For example support for ecological reserves that welcome endemic species and which have tourism potential; to optimize costs and maximize benefits.</p> <p>Monetary distribution that allows the worthy tourism covering basic needs and enabling growth of receptive communities.</p>
CNTA China National Tourism Administration	Indirect Not conflictive	Recognition and agreements realization with destinations interested in Chinese market	By its regulatory faculties prioritize binational agreements with sustainable destinations
Travel Agencies from destinations	Direct Conflictive	Formalize representativeness which besides involving accreditations stimulates tourist flow, in terms of quality to safeguard sustainable development implementing mechanisms to identify and comply legislation on environmental, cultural, and professional aspects.	<p>Incorporation of awareness programs, about practice and reception of sustainable tourism that does not compromise the well-being of the community and workers of tourist industry.</p> <p>From the identification of which of its activities, products and services have impacts on sustainability, evaluate and determine priority actions including environmental, socio-cultural and economic considerations. As a result define a impacts minimization and benefits optimization program.</p>
Tour Operators from destinations	Direct Conflictive	Products design and control mechanisms	<p>Democracy in group people organization, making decisions to respond collective willingness, by means of direct or indirect participation mechanisms, limiting total openness towards tourist corporations that leave aside the opinion and actions of national tourist service providers. Strengthen cooperation between services providers, promote linkage of operations that standardize sustainability aspects, and its validity using intercommunication</p>

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			and participatory methods of training and learning. Get over programs implementation and strategies to aware of sustainability, strengthening links with counterparts in China which have sustainable practices and if these doesn't exist, promoting link base don taht oportunity.
Service providers in Mexico hoteliers, restaurateurs, tour guides, transporters	Direct Conflictive	Need to adapt services	Services transformation with changes such as staff that speaks mandarin, personalized attention, satisfaction of interests in customs and cultural order. Control and monitoring of these adaptations by measuring instruments in responsiveness of problem solving in direct operation of the service. Highlight "nature" theme products using this as an activity/experience decisive factor to the market (Yun and Joppe, 2011) that has guided the tradition of their travel (Yan and McKercher, 2013). Educate tourist and service provider about affectations as wildlife products marketing threatening species in extinction danger, as it refers to the consumption of ivory and shark fin by Chinese market .
Chinese Tour Operators and Travel agencies	Direct Conflictive	Need to contact receptive companies to iniciate groups operation	Establish binational partnerships under pre operative criteria.
Institution with competent authority in immigrant regulations	Direct Conflictive	Facilitate and expedit visa procedures for Chinese nationals who wish to travel to their destinations	Guarantee entries in destinations under ethic and respect for human rights. Obligations and prohibitions that determine certain behavior.
Public Security Boreau	Direct Conflictive	Monitor and regulate passports to travelling chinese	Asigning passports to authorized destinations.
Chinas' comercial Boreau that interferes in Touism Polithics implementation	Direct not Conflictive	Endorse and restrict agreements with foreign companies	Promote corporate alliance under fair principles.

Conceptual Model

Model includes five essential functions for viability (Beer 1979, 1981,1985) as regulations for the abstraction of the real situation channelled to the precision of a topology that involves fewer conflicts for the evolution of the overall system by the particular connection that promotes sustainable tourism development with better response to the emergencies implied in the chinese outbound tourist market consumption (Figure 2). An example of localized dysfunction an it's sustainable systemic approach solution is shown in Figure 3.

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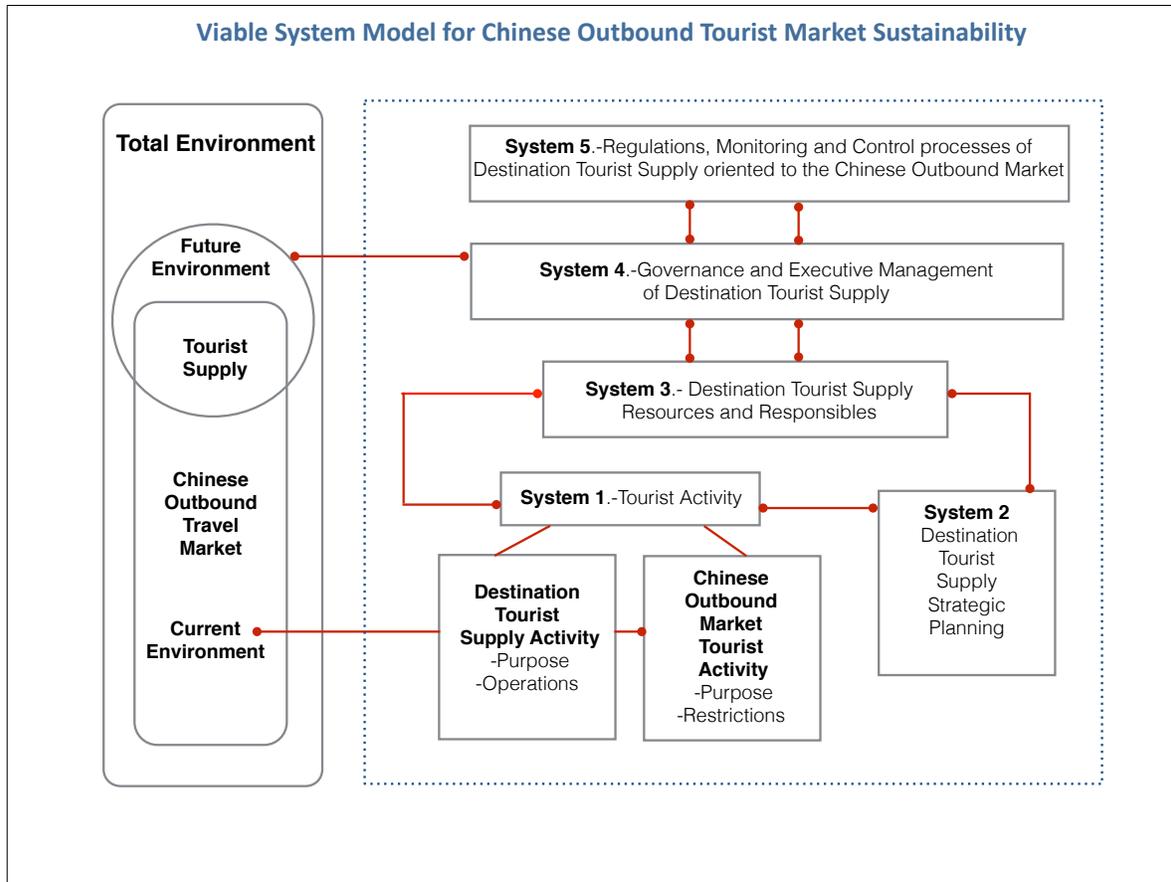


Figure 2. Conceptual Model

Based on Soft Systems Methodology (Checkland, 1994) and Viable System Model (Beer, 1979, 1981, 1985)

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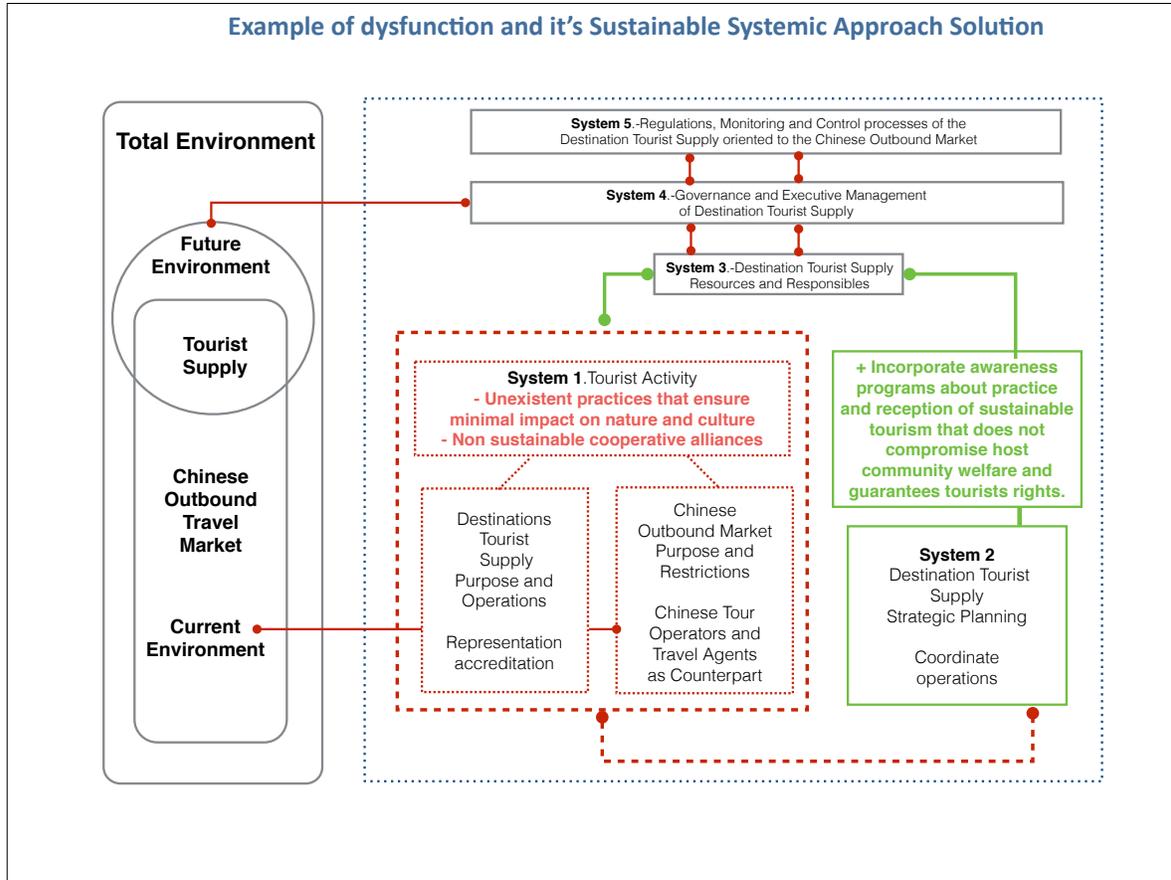


Figure 3. Example of dysfunction and it's Sustainable Systemic Approach Solution
Based on Soft Systems Methodology (Checkland, 1994) and Viable System Model (Beer, 1979, 1981,1985)

Model Components' Systemic Integration oriented to Chinese Outbound Tourist Market Sustainability

Given that Soft Systems Methodology (Checkland, 1994) allows the usage of tools for model design, in this case the guideline was Viable System Model (Beer, 1979, 1981,1985) to orient the construction and adding outcomes from the diagnose, attention to some emergent attributes considering sustainability was set out.

1. **System 1** Tourist Activity includes two main activity subsystems (Tourist Supply and Chinese Outbound Travel Market) that demarcate tourist identity of the organization. By its recursive nature and convergence in the current environment they are exposed to a constant exchange of information.

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Their confluence lies in the purpose, restrictions and motivations of Chinese Outbound Market Tourist Activity as emergencies, situation that the counterpart (Purpose and Operations of the Tourist Supply) must attend through the balance of variety and entropy.

2. **System 2** Tourist Supply Strategic Planning, corresponds the interface function between systems 1 and 3 and must generate information to coordinate a certain conduct of the Organization operations. Assertiveness will depend on the selectivity of foundations on which channels and information bodies originates, which is consistent with attendance of the conflicts found that can be approached being aware of the market evolution that consequently relates to attributes that mitigate adverse effects, for example guarantee human rights respect, not overtaking destinations load capacities, or strengthen host communities development.

Accordingly base a performance that improves operations even relating to the side of rational and effective decision making as De Fellice, Deldoost, Faizollahi and Petrillo (2015) pointed out to suppliers' selection process. That is to say outputs of behaviors based on prior knowledge that will represent strategies which are the means for given interrelationships in the light of sustainable viability between systems operations 1 and 3.

Back on the idea of assertiveness and the concerning of conflicts; considering importance degrees in relations, the relevance to adopt sustainability is underlined because of it's incurrence in the overall system performance improvement.

3. **System 3** Resources and Responsibilities of Tourist Supply System, as configuration for institutional and corporate financial strategies, it has to do with resources allocation, responsibilities and rights; and simultaneously it is the interface between systems 4 and 5.
4. **System 4** Governance and Executive Management System of Tourist Supply, on it lies environment perception, and from it strategic responses loose building up the future of the Organization through the principle of adaptability in the light of viability.
5. **System 5** Regulations, Monitoring and Control processes of the Tourist Supply System oriented to Chinese Outbound Market sustainability, represents a behavior that ensures the transformation and operates as feedback to determine whether relations that arise as ideals really meet the attempted sustainability.

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CONCLUSION

Attending potential Chinese Market presents the ideal occasion for sustainability, given that when tourist flows increase; this strengthens its relevance to overcome challenges ensuring economic benefits without compromising natural and cultural balance. This article promotes to embrace environmental measures not as technical barriers for tourism activities, because it is not the objective to decrease in tourism income, but to improve the overall system; understanding sustainability as part of economic, environmental and social development; by identifying emergencies appropriately.

The proposal is to strengthen tourism with sustainability to contribute most significantly, given that being sustainable is to achieve social and environmental growth looking for success opportunities in emerging markets, being consistent with the increasing preference by customers for a consumption in sustainable conditions.

Tourist planning that omits sustainable character severely reduces benefits with consequences not only ecologically harmful but also economically self-destructive bringing system collapse not balancing negative entropy of the problem with the positive from the environment. Discernment that requires multidisciplinary research, as an example this proposal that made a diagnosis from synthesis science; noticing deficiencies in the system that obstruct reaching a prolific sustainable tourist consumption from the Chinese Outbound Market. The need to gain in that sense, gives the opportunity to list attributes that tourism should offer congruent with looking after natural resources that generate travelling and tourist consumption; industry that needs coordination and holistic planning that integrates knowledge, skills and sustainable values. Given that sustainable tourism has been seen as a solution to negative impacts, trying to reduce tensions between industry, visitors, environment and communities; because of its potential for development and heritage conservation.

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