

# **A NEW THEORETICAL FRAMEWORK FOR THERAPEUTIC LANDSCAPES: COASTAL (BLUE), FOREST (GREEN), SPIRITUAL “POWER SPOTS” (GOLD) AND WILDERNESS (DARK/WHITE)**

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## **ABSTRACT**

This paper aims to discuss the healing and wellbeing effects induced by places and landscapes such as coastal (blue) areas and green spaces. Adopting a holistic approach, the paper fills a gap by exploring the therapeutic benefits of other short-term experiences such as: spiritual/introspective (gold), sensation seeking/excitement, achievement-oriented, symbolic and transformative experiences. “Dark” and “white” sceneries such as risk recreation and pilgrimage to “land’s ends”, dystopian places and (white) extreme wilderness were also analyzed. The negative externalities caused by neighborhood social and physical disorder (grey zones) complete the “pallet of colors”. This conceptual paper fills a gap providing a new tool to map place brands according to two positioning axis: 1) Physical Health (passive absorption/ residential exposure) (positive versus negative impact); 2) Spiritual versus Excitement/Self-achievement (active way/ short exposure). Furthermore, it proposes also a new theoretical framework for the “salutogenic health system” and for the “governance support system”. The paper’s contributions will help place brand managers, public decision makers and tourism operators to develop innovative place based policies using those health benefits as a driver for place branding positioning.

**Keywords:** Therapeutic Landscapes, Green Areas, Coastal Blue Areas, Psychological Wellbeing, Spiritual Experiences, Self-Achievement Experiences.

**JEL Classification:** Z32

## **I. INTRODUCTION**

Acknowledging the contributions of literature from Social/ Preventive Medicine and Environmental Psychology, this conceptual paper aims to fill a gap in the literature. It discusses the healing and wellbeing effects induced by landscapes, such as green spaces (Hansen-Ketchum et al., 2011; Finlay et al., 2015; De Bell et al., 2017) and coastal (blue) areas (White et al., 2010; Völker & Kistemann, 2011; White et al., 2014; Bell et al., 2015; Foley & Kistemann, 2015; De Bell et al., 2017; White et al., 2017).

The term “therapeutic landscape” has traditionally been used to describe landscapes with “enduring reputation for achieving physical, mental and spiritual healing” (Gesler, 1993, quoted by Velarde, Fry & Tveit, 2007: 200).

Firstly, it is important to stress that this is a complex, multidimensional and multidisciplinary research topic, because of many overlapping causal relationships influencing human health outcomes. Therefore, this paper encompasses the following goals: 1) it confirms the existence of scientific evidences of direct and indirect therapeutic effects of different types

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of landscapes; 2) it identifies the most relevant first-order moderators and mediators; 3) it expands the analysis to non-residential short-term experiences, acknowledging the role of different motivators; 4) it expands the analysis to dystopian places that have harmful effects on human health; 5) it proposes a new positioning map for therapeutic place brands; 6) it extracts the most relevant recommendations for policy makers and decision-makers from place development and place branding optics; 7) it illustrates those recommendations with best-practices case-studies.

Since 2000, when the philosopher Glenn Albrecht coined the term “psychoterratica”, (<https://glennaalbrecht.com/>), in several areas of our society, there is an increasing trend to discuss the relationship between physical/ mental health, environment and human lifestyles. Furthermore, there are several examples showing medicine is validating the benefits of the exposure to nature. For example on 2019, doctors in Scotland start to prescribe “spending time nature” to their patients while the NHS Forest project (<http://nhsforest.org/>) provide information about several “forest routes”.

Moreover, several scholars dedicated to landscape research also claim that Landscape Aesthetic Quality (LAQ) can be regarded as an important cultural ecosystem service that positively affects humans’ health and well-being (Bratman, Hamilton & Daily, 2012; Hermes, Albert & von Haaren, 2018). Evidence from various studies suggests that (direct or indirect) contact with high LAQ landscapes can increase cognitive performance, enhance people’s mood, foster the mental and motoric development of children, support recovering from stress and mental fatigue, trigger positive emotions, and promote physical activity and social interactions (Abraham, Sommerhalder & Abel, 2010; Russell et al., 2013).

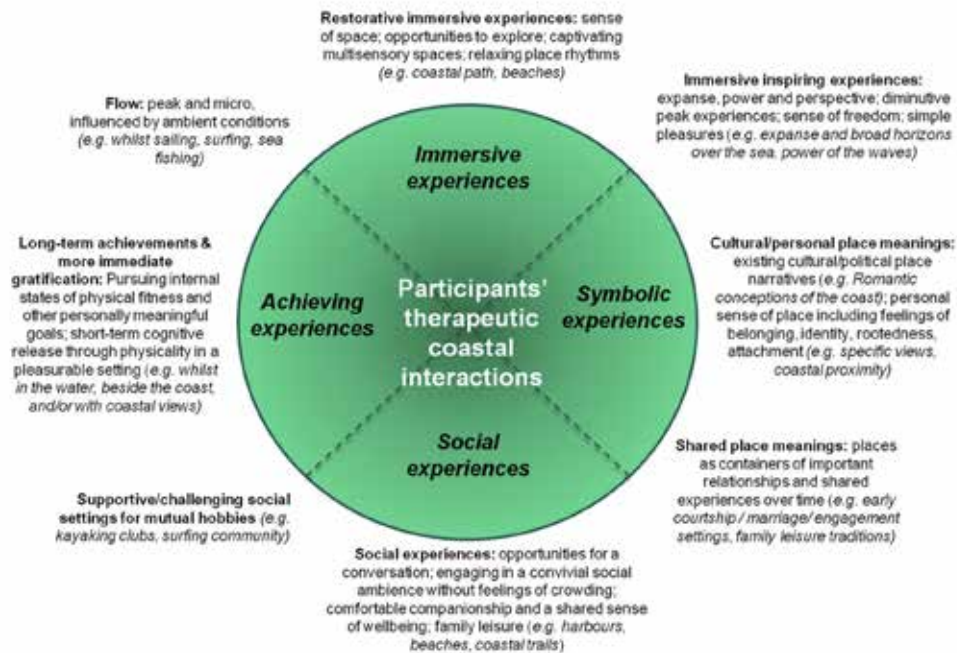
Inspired by the effect of colors on perception of places examined by Lengen (2015) and “palettes of places” (including the spiritual dimension) proposed by Bell et al. (2018), the major contribution of this paper is the exploration of the therapeutic role of other categories of places and experiences less explored by researchers.

This paper proposes a holistic approach by highlighting new research avenues, focusing firstly in the sensation seeking (excitement experiences) and lastly the spiritual/introspective experiences (Bell et al., 2018), including the absorption of Earth’s “energy” exemplified by Japanese “power spots” (Kato & Prozano, 2017; Carter, 2018) or Irish “holy wells” (Foley, 2011).

The paper also analyzes the achievement-oriented, immersive, symbolic and transformative experiences (see Figure 1), their implicit meanings, the gaze and emotions evoked by other “dark” and “white” sceneries, fueled by the risk recreation associated to danger (fear) sensations: lighthouses and “land’s ends” pilgrimage (Azevedo, 2018); attraction for abandoned buildings and other dystopic (dark) places (Podoshen, 2013; Podoshen et al., 2015); the isolated remote islands, the (white) extreme wilderness such as Iceland, Alaska or Scandinavia (Ólafsdóttir & Runnström, 2011; Vidon, Rickly & Knudsen, 2018).

On other hand, this paper also acknowledges the influence of the time of exposure in the landscape. While residents have a long exposure to landscape’s therapeutic effects, tourists and participants of short-term experiences must have a minimum level of exposure in order to receive the therapeutic benefits (White et al., 2017). Nevertheless, Velarde, Fry and Tveit (2007) found evidences of those benefits in experiments in which individuals only saw a photo or watched a video.

Figure 1. Four Overlapping (blue) Therapeutic Experience Dimensions



Source: Völker and Kistemann (2015), quoted by Bell et al., (2015: 65)

This paper will propose a theoretical framework that applies to all kinds of places focusing in meso and micro geographic scales, in urban or rural contexts. Nevertheless, this topic is especially relevant for waterfront cities, city marine parks and nature-oriented cities. Those cities may benefit from a place branding positioning, based on high standards of health indicators, as consequence of premium quality of life conditions, place based health promoting policies, and healthy lifestyles. The launch of journals such as *Cities & Health* or *Health & Place* is a sign of increasing spotlights on this research topic (Grant et al., 2017).

What is a healthy city? It is one that “continually creates and improves its physical and social environments and expands the community resources that enable people to mutually support each other in performing all the functions of life and developing to their maximum potential” (WHO Healthy Cities Project, Tsouros, 2015, quoted by Pittman et al., 2019: 102). According to Kenzer (1999), the Healthy Cities approach includes a strong focus on empowerment and participation, being concerned with individuals’ ability and autonomy to live a healthy life.

The literature review section will demonstrate that the overall result will depend of several moderating factors which are related to: 1) users (psychographic and demographic variables, motivations etc); 2) places (landscape aesthetic quality, other quality of life drivers, climate conditions, quality of ecosystem services and infrastructures, etc); 3) and place-based policies (urban planning and development strategies) thus highlighting the role of policy-makers and other stakeholders.

## 2. LITERATURE REVIEW

### 2.1 Influence of Green Spaces on Individuals’ Health

The UK Department for Communities and Local Government has defined a range of green spaces: 1) *parks and gardens*; 2) *natural and semi-natural urban green spaces* – including woodlands, urban forestry, grasslands, common land, wetlands, area of open and running

water, wastelands, derelict open land and rock areas; 3) *green corridors* – including canal and river banks, cycle ways and rights of way; 4) *outdoors sports facilities*; 5) *amenity green space around housing*; 6) *playgrounds for children and teenagers*; 7) *allotments*, (community gardens and farms); 8) *cemeteries and churchyards*; 9) *accessible countryside* in urban fringe areas; 10) *civic spaces*; 11) *landscape around buildings* – including street trees.

Green space multi-functionality has often been emphasised as relating to recreation, social interaction, aesthetics, cultural heritage and ecological functions (Haaland & van den Bosch, 2015). The concept of ecosystem services (Millenium Ecosystem Assessment, 2003), has also been applied to urban green spaces (Kabisch, Qureshi & Haase, 2015) and their regulating services include: air purification, water and climate regulation, carbon storage and stormwater regulation and biodiversity conservation (Haaland & van den Bosch, 2015).

The physiological or self-reported therapeutic effects of different types of exposure to green visual landscapes/stimulus (images, videos, physical presence, etc.) are reported in dozens of studies identified in several systematic literature reviews (Velarde et al., 2007; Gascon et al., 2015; Kabisch, Qureshi & Haase, 2015). More recently, for example, Engemann et al. (2018) concluded that childhood exposure to green spaces reduces the risk of schizophrenia and other mental disorders.

The most common measures of therapeutic effects are: Health-related Quality of Life assessed with Medical Outcomes Study Short Form 12 (SF-12v2) (Jenkinson et al., 2001; Völker et al., 2018), Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) or The World Health Organization Quality of Life (WHOQOL), mental health related measures like post-traumatic stress disorder (PTSD) or even Satisfaction with Life (SWL).

On 2013, Public Health England (PHE) set up “The Healthy Places” programme in recognition of the fact that where we live (and the homes we live in) has a big impact on our health and wellbeing. PHE also developed “The Environment and Health Atlas for England and Wales” which informs researchers, policy-makers and the public on the geographic patterns of disease and potential exposure to various environmental agents. Moreover, in 2014, the UCL Institute of Health Equity (IHE) released a report “*Improving Access to Green Spaces*” providing evidences that people living in the most deprived areas are ten times less likely to live in the greenest areas compared to people living in the least deprived areas.

Access to good quality green space (which should be closer than 400m/ 9min walking) is associated with positive health outcomes (Lee & Maheswaran, 2010), including: improvements in mental health and wellbeing (Krekel, Kolbe & Wüstemann, 2016), such as depression, stress, dementia (Grahn & Stigsdotter, 2010; White et al., 2013); increased longevity in older people; lower body mass index (BMI) scores, overweight and obesity levels and higher levels of physical activity (Takano, Nakamura & Watanabe, 2002); better self-rated health.

However, Gascon et al. (2017) revealed a lack of studies supporting the existence of direct effects of those therapeutic landscapes on human physiological and biological health indicators (example: obesity, cardiovascular diseases and diabetes). One exception is the study conducted by Li et al. (2009) who found evidences of effect of phytoncide from trees on human natural killer cell function, thus giving scientific support to the practice of “forest baths” in Japan.

However, the efficiency of green areas as a health driver is facing several challenges and threats: a) the densification of cities reduces the private green areas and the quality of public areas (Haaland & van den Bosch, 2015); b) low quality green spaces may affect negatively user health indicators (Van den Berg et al., 2015); c) other factors such as the level of biodiversity are also important driver (Carrus et al., 2015).

We may conclude that the role of green areas as leisure and health driver has already received a lot of attention from urban management and planning researchers. Therefore, this paper will give more space to other less explored landscapes such as the seascapes.

## 2.2 Influence of Blue/Coastal Areas

Pittman et al. (2019: 103) defined *city seascape* as “the marine and coastal space (above and below water) that most influences the city and is most influenced by the city. The size and shape of this seascape space will be unique to each coastal city. The attributes that define a city seascape will likely be holistic and include places and features with cultural, social, economic, geological and biological significance and may extend inland from the coast to encompass the tidal reaches of rivers and wetlands”.

On other hand, *blue space* was defined by Pittman et al. (2019) as “all ‘health-enabling places and spaces, where water is at the centre of a range of environments with identifiable potential for the promotion of human well-being’ (Foley & Kistemann, 2015). Blue space is a component of the city seascape with therapeutic benefits varying through multi-dimensional space”.

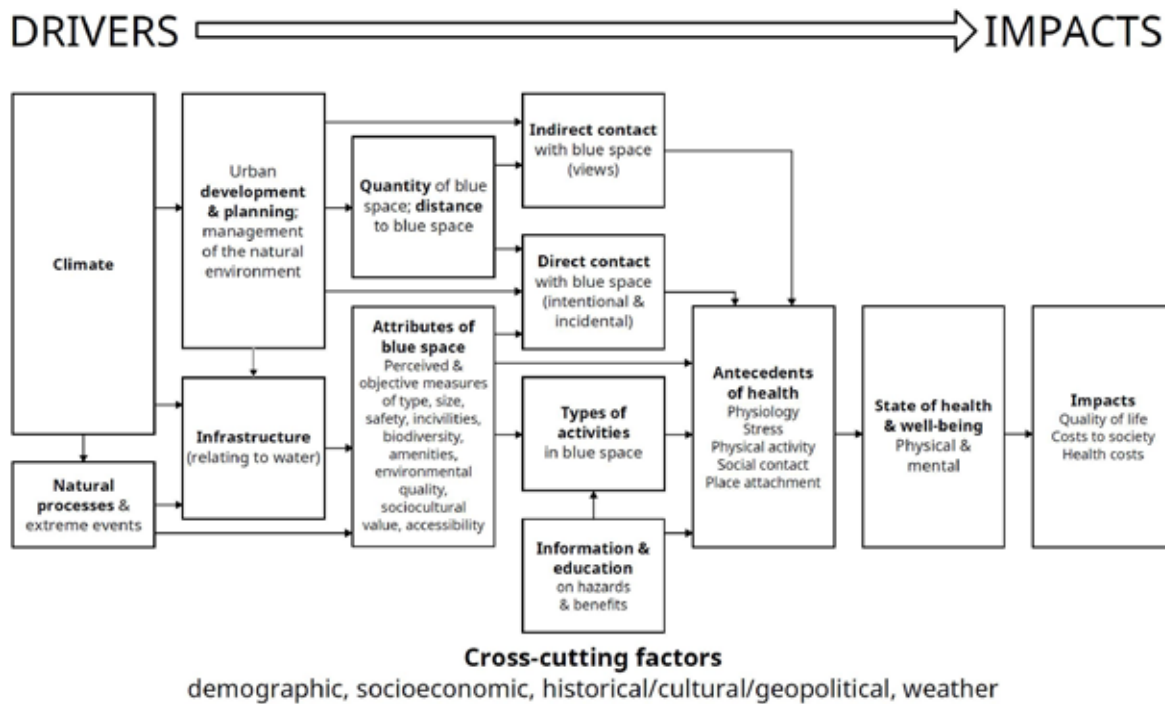
Considering a non-exhaustive approach, this paper analyzed several systematic reviews supporting the therapeutic benefits of the exposure to coastal landscape: Gascon et al. (2015), Gascon et al. (2017) and Britton et al. (2018). Those benefits fall into the following categories: emotional, restoration and recreational, direct health, psychologic and wellbeing (*stress reducers*), such as contemplation, emotional bonding, social interaction or participation (Völker & Kistemann, 2011, 2013, 2015; Pearson et al., 2017).

In order to explain those benefits some theories have emerged. Brooks, Wallace, and Williams (2006) amongst others suggested the Symbolic Interactionism (SI) theory, claiming that relationships with place were fostered by “being at and engaging with a place and one’s companions, extended stays, ritualized behaviors, family history in the outdoors, childhood socialization, and informal training and social learning”. Alternatively, Rose (2012) and Lengen (2015) suggested the psychoanalytic theory of ‘mentalising’ to explain the therapeutic effects based on the role of the significance of prior familiarity with representations of specific landscapes, their contribution to imaginative or projective reconstructions and the importance of cultural resources.

Moreover Bell et al. (2015) analyzed the geo-located narratives of 33 participants that deeply described their insights, emotions and cultural symbolisms elicited during their activities for six months along the coast of two towns in Cornwall (England). *Figure 1* presents the four overlapping (blue) therapeutic experience dimensions proposed by Völker and Kistemann (2015). According to Bell et al. (2015) research, blue spaces provide the ideal conditions for: 1) restorative immersive experiences, such as aesthetic contemplation of beaches and coastal landscapes; 2) immersive inspiring experiences, such as introspective admiration of the power of waves; 3) symbolic experiences, exploring cultural/personal sense of place meanings, the sense of belonging, and place attachment resulting from place identity building (Anton & Lawrence, 2014; Scannell & Gilford, 2017; Townsend et al., 2018); 4) social experiences, exploring shared place meanings with the significant others; 5) social experiences as opportunities to engage community and family activities; 6) supportive/challenging activities (for example in bad weather conditions); 7) long-term achievement (and more immediate gratification) experiences.

This research topic got the attention of public decision makers, so Grellier et al. (2017) conducted the European project Blue Health 2020 aiming to map and quantify the public health impacts of changes to both natural blue spaces and associated urban infrastructure in Europe. The researchers of the Blue Health 2020 developed a theoretical framework (see *Figure 2*) describing the causal chain between drivers and impacts.

**Figure 2. BlueHealth Conceptual Framework: An Influence Diagram Describing the Causal Chain between Drivers and Impacts under Investigation in the BlueHealth Project**



Source: Grellier et al. (2017, p.3)

The BlueHealth framework summarizes the findings of this section postulating that the attributes of blue space and its activities have a significant influence promoting physical activity, stress reduction, socialization and place attachment. Ultimately, the contact with blue space has a positive impact in quality of life and public expense with health. One important contribution of the BlueHealth is the identification of major drivers: climate, natural processes, urban development and planning, infrastructures, access to blue space and their attributes including safety and incivilities. There are other individual factors, such as education or health antecedents, that have direct influence on health. The next sections will explore some short-term experiences that may produce the same type of effects on residents or tourists' mental health and wellbeing.

### 2.3 Non-residential Short-Term Experiences

Acknowledging the role of different motivators, this paper aimed to expand the analysis to non-residential short-term experiences, as framed by the theory of therapeutic experience dimensions described at Figure 1 (Bell et al., 2015; Völker & Kistemann, 2015).

#### 2.3.1 Nature, Eco, and Adventure Therapies

According to Buckley and Brough (2017) there is a wide range of such programs do exist, under names such as ecotherapies, adventure therapies, outdoor adventure interventions, ecopsychosocial interventions, lifestyle therapies, and green prescriptions, but currently, at rather small scale in global terms. We refer to them here, in aggregate, as nature, eco, and adventure therapies (NEATs). Alternatively, Reese et al. (2018) introduced the notion of EcoWellness: "one's appreciation, respect for, and awe of nature that contributes to greater connection with one's self and nature and resulting in holistic wellness". This construct can be measured using the EcoWellness Inventory (Reese et al., 2015).

### 2.3.2 *Spiritual/ Transformative Experiences*

On other hand, the NewAge movement sees Earth as containing many power spots and energy sites that facilitate the transformation of individual consciousness (Attix, 2015; Horie, 2017). The concept of “power spot” generally refers to “specific places where energy gathers and can bestow good fortune, healing or other practical benefits on visitors” (Kato & Prozano, 2017: 246).

On other hand, places can inspire feelings of spiritual enlightenment. Spirituality and spiritual healing were core components of Gesler’s (1993) initial concept of therapeutic landscapes, which has since been employed to understand several different types of pilgrimages, formal and informal, religious and secular (Bell et al., 2018). For Willson, McIntosh and Zahra (2013), spirituality is the seeking of a harmonious relationship or ‘oneness’ with self, ‘other’ (including other people, animals, the earth, nature) and/or God/Higher Power. People who undertake spiritual tourism usually feel ‘energised’, ‘inspired’ and ‘uplifted’ after their trips and feel a sense of ‘connectivity’ with people from other parts of the world (Kujawa, 2017; van Laer & Izberk-Bilgin, 2018).

According to Powell et al. (2012: 147) there is an awe caused by the interplay of a range of experiences comprising five possible sub dimensions: spiritual connection; transformative experience; goal clarification; refinement of human-nature relationship; sense of feeling humbled. That is the case of pilgrimage to “land’s ends” or “ends of earth” (in latin *Finis Terrae*) such as Finisterra (Spain) or Finistère (Brest-France). Since the ancient times, pre historic men and women used to pilgrim to those “power spots” to celebrate or perform rituals (Dunkley, Morgan & Westwood, 2007). Moreover, the physical exercise associated to walking/pilgrimage improves the self-reported health and the willing to pursuit a healthier life (Kim, Kim & King, 2016).

### 2.3.3 *Self-achievement Experiences: Sensation Seeking, Wilderness Therapies, Risk Recreation, and Euphoria*

Finally, this last section fills a gap in the literature because it gives an innovative contribution to the discussion. Although some self-achievement experiences involve potential physical risks, they may awake the *euphoria* related to heroic overcoming of challenges and the encounter with natural primitiveness. From tourism literature, we know that some individuals are addicted to adrenalin and strong sensations and, therefore, they are prone to engage in escape self-achievement experiences with high levels of co-creation and personalization. These experiences usually involve physical and financial risks.

Zuckerman (1994: 27) defined the *sensation seeking* construct as: “a personality trait defined by the seeking of varied, novel, complex and intense sensations and experiences, and the willingness to take physical, social, legal and financial risks for the sake of such experience”. Zuckerman (1978), quoted by Xu et al. (2012), also developed the Sensation Seeking Scale (SSS-V) comprising four subscales, Thrill and Adventure Seeking, Experience Seeking, Boredom Susceptibility, and Disinhibition.

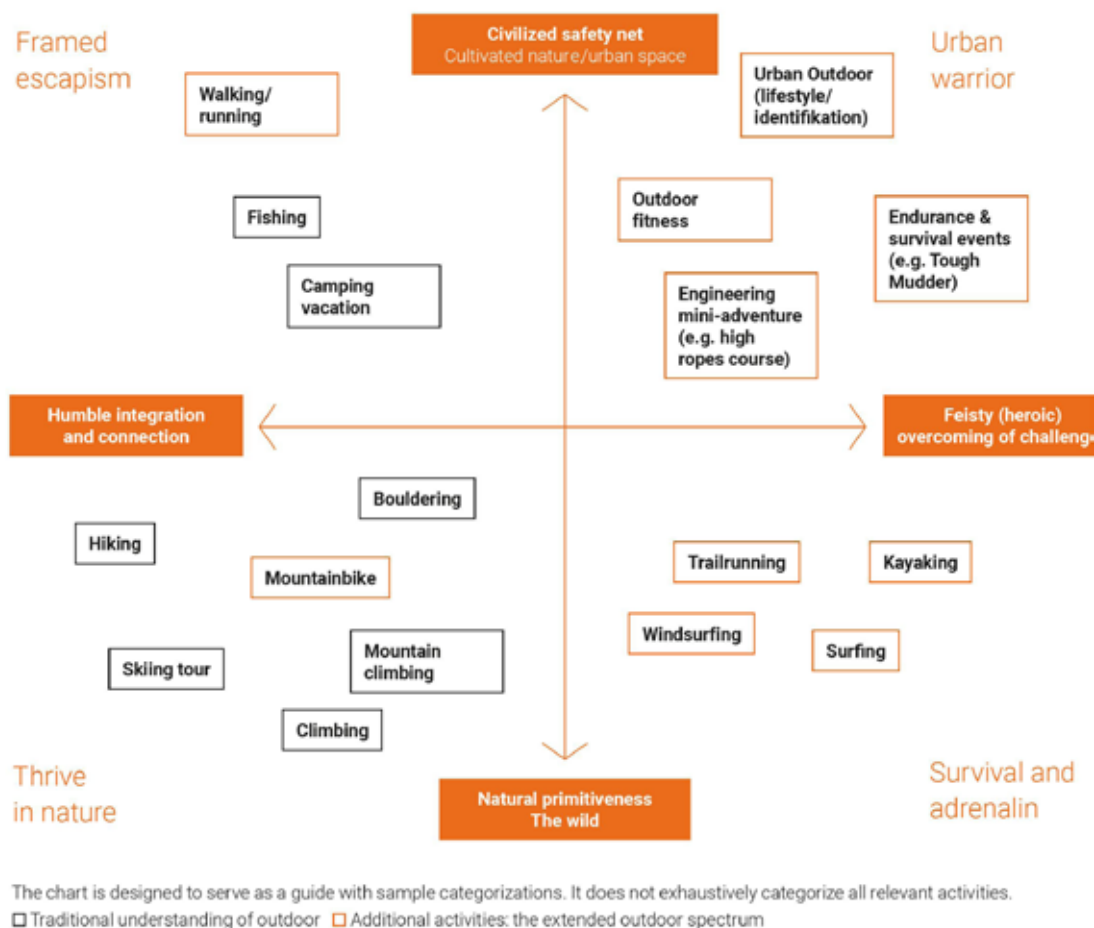
Clough et al. (2016) and Buckley (2018) have demonstrated that even the extreme adventurous physical activities are linked to enhanced psychological health and well-being outcomes. Moreover, Buckley (2018) argues that the key benefit of adventurous outdoor nature sports, not provided either by non-adventurous exercise or by nature exposure, is that it can create euphoria, which can temporarily override chronic pain and psychological stress associated with other aspects of ageing.

According to the qualitative research “Outdoor as human need” made by Rheingold Institute in collaboration with OutdoorbyISPO ([www.ispo.com](http://www.ispo.com)), outdoor activities can be mapped using two axis (see *Figure 3*): X- Humble integration and connection versus Feist

(heroic) overcoming of challenges; Y-civilized safety net versus Natural primitiveness-the wild. The map of *Figure 3* inspired the proposal of a new tool for helping the place brand positioning based on health driver attributes (see *Figure 4*).

Therefore, long-term self-achievement experiences such as surviving events in isolated remote islands may motivate people to travel to hostile places or engage in wilderness therapies. According to Hagan (2002) quoted by Bettmann et al. (2016) there are three types of *wilderness therapy* (WT) programs: continuous trekking also known as expedition model, short term residential, and long term residential. Bettmann et al. (2016) made a meta-analysis based on 36 studies, totalizing 2399 participants receiving wilderness therapy. Russell (2000: 170) defined WT as “[t]he use of traditional therapy techniques, especially group therapy techniques, in a wilderness setting, when the wilderness is approached with therapeutic intent” and it is designed to “reveal and address problem behaviors, foster personal and social responsibility, and enhance the emotional growth of clients” (Russell & Phillips-Miller 2002: 415).

Figure 3. Map of the Outdoor Activities According to the Psychological Dimensions



Source: OutdoorbyISPO, White Paper nr.2

### 2.3.4 Grey Zones: Neighborhood Social Disorder, Dark Tourism and Recreational Attraction for Dystopian Places

This paper proposes an holistic theoretical framework, which besides the blue and green areas, also accommodates the “grey” zones with negative health indicators caused by long-term exposure to negative place’s characteristics such as air pollution, soil and



water contamination levels, demographic pressure, deprived deindustrialized economies or stressful urban rhythm (Riva et al., 2011). Scholars from different disciplines like sociology, criminology, social psychology or epidemiology, use the notion of *neighborhood disorder* to describe this problematic (Marco et al., 2015).

Neighborhood (social/physical) disorder can be defined as “observed or perceived physical and social features of neighborhoods that may signal the breakdown of order and social control, and that can undermine the quality of life” (Gracia, 2014: 4325). Examples of neighborhood disorder may include behaviors such as prostitution, drug dealing, and fighting in the streets, or physical characteristics such as abandoned cars, vandalized/abandoned buildings (such as warehouses and industrial factories), graffiti streets or dumpsters (Sampson & Raudenbush, 1999) or simply the “broken windows” effect (Wilson & Kelling, 1982).

More recently, research on social disorder has also examined its influences on individual well-being indicators like subjective well-being, psychological distress, anxiety, or depression (García-Ramírez, Balcázar, & de Freitas, 2014; Marco et al., 2015), and how this may affect negative health behaviours, such as low physical activity, heavy drinking, smoking, or obesity (Echeverría et al., 2008). Research has also examined the association between neighbourhood disorder and different public health issues such as health service usage, low body weight at birth in children, injuries, sexually transmitted diseases, loss of physical function in older adults, and mortality risk (Martin-Storey et al., 2012).

However, a different situation occurs when people visit dystopian places for a short period due to recreational motives (Podoshen et al., 2015). Dystopia, as opposed to a utopia (which creates an ideal future world, often without borders) presents “an image of future societies, pointing fearfully at the way the world is supposedly going, in order to provide urgent propaganda for a change in direction” (Podoshen et al., 2015). Some people may think their lives are miserable and they would rather escape from the cruel reality than escape into a more troublesome world.

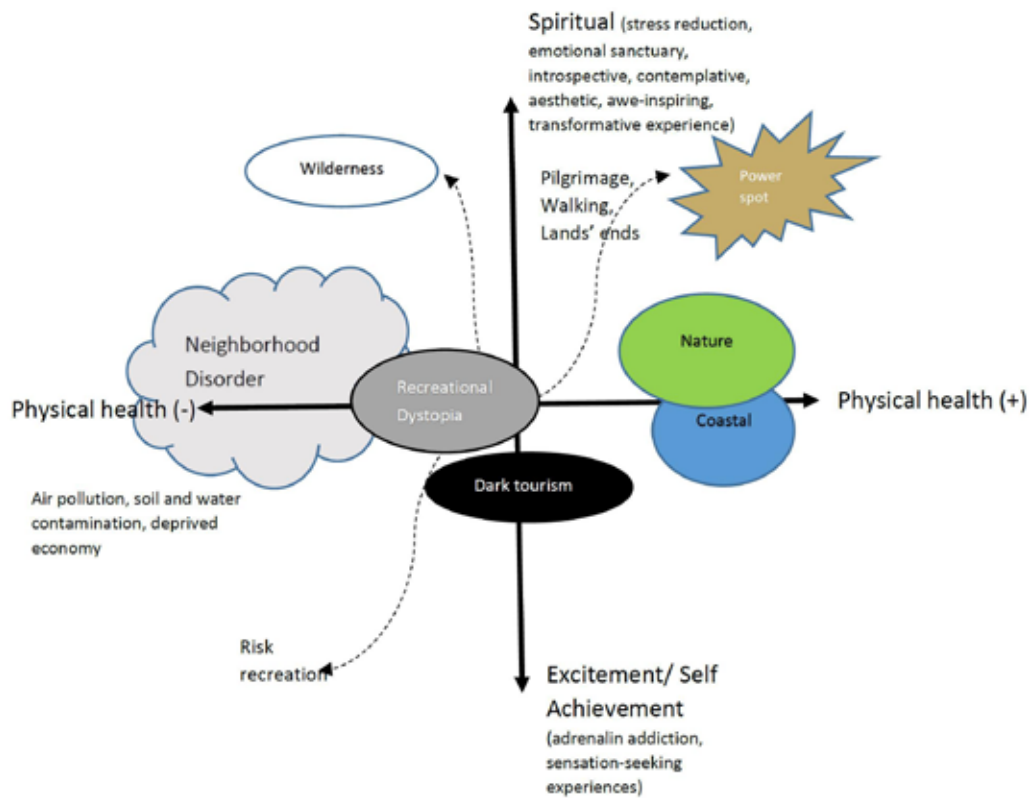
According to Laing and Frost (2016) and Martini and Buda (2018) there are potential psychologic benefits resulting from the engagement in dark tourism experiences: fulfilment of an obligation, memory development, resilience, escape, relaxation (Zheng et al., 2016), accessing the death drive in order to confront personal fears of death to negotiate personal memories and past traumas (Light, 2017).

### 3. A NEW TOOL: THERAPEUTIC PLACE BRANDS POSITIONING MAP

This conceptual paper aims to propose a place brands’ positioning map and inspire researchers to design qualitative and quantitative studies in order to validate our propositions. Authors, besides an extensive literature review, also analyzed articles recently published in several social media and magazines webpages, which cover the intersection between health and places (Kozinets, 2010).

The grid proposed in *Figure 4* applies to meso and micro geographic scales, inland or outland considering that the level of “exposure” of the residents versus tourists is long enough (Nutsford et al., 2016; De Bell et al., 2017). Adopting the “pallet of colors” approach, author proposes and discusses a new theoretical framework to map places according to two positioning axis: 1) Physical Health (passive absorption way/ long exposure) (positive versus negative impact); 2) Spiritual versus Excitement/Self-achievement (active way/ short exposure).

**Figure 4. A Proposed Therapeutic Place Brands Positioning Map**



Source: Own Elaboration

The choice for the positioning of the green versus blue areas was based on significant differences, which were identified in previous studies about Landscape Aesthetic Quality (LAQ):

a) Völker and Kistemann (2015) made a comparative study in German assessing the health responses to blue versus green urban areas. They found that some health-enhancing effects (enhanced contemplation, emotional bonding, participation, and physical activity) turned out to be prominent for urban blue in the four conceptual therapeutic landscape dimensions: experiential, symbolic, social and activity space. b) Hermes, Albert and von Haaren (2018) and Walz and Stein, (2014) found in their surveys that participants rated higher scores in naturalness and uniqueness for coastal blue areas compared to green areas;

c) Komossa et al., (2018) built the spatial maps of landscapes' outdoor recreation potential throughout the EU based on different landscape preferences of five archetypical outdoor recreation user groups (convenience recreationist, day tripper, education recreationist, nature trekker and spiritual recreationist). While convenience recreationists are attracted by water proximity, spiritual recreationists prefer inland old forests and high mountains.

The framework of *Figure 4* proposes the inclusion of two new dimensions. Firstly, it acknowledges the role of spirituality and mindfulness (“gold”) comprising the immersive, symbolic, introspective or transformative experiences such as pilgrimage or the absorption of Earth’s “energy” in Japanese “power spots”. Secondly, it also analyzes the sensation seeking and excitement caused by achievement-oriented experiences, their implicit meanings, the gaze and emotions evoked by other “dark” and “white” sceneries such as: lighthouses and “land’s ends” pilgrimage, dystopian (dark-grey) places, the isolated remote islands, the (white) extreme wilderness (eg. Iceland, Alaska or Scandinavia); or the risk recreation associated to danger (fear) sensations.

## 4. CONCLUSION

### 4.1 Research Implications and the Proposed “Salutogenic Health System”

The literature review supports the claim that living in blue and green spaces have a positive impact on individuals’ physical and mental health. As research output, this paper proposes a new “Salutogenic Health System” theoretical framework (see *Figure 5*), which aims to accommodate all antecedents:

- a) Controllable policies- 1) Place planning, development, and conservation policies, 2) Destination branding and marketing strategies, 3) Other quality of life factors;
- b) Uncontrollable factors- 4) Climate and natural processes;
- c) Individual users moderating variables (5);
- d) Therapeutic landscape attributes (A) and their access opportunities (A1)
- e) Short-term experiences (B)

The framework also encompasses the behavioural consequences (C) and the indirect and direct effects on psychologic health (D1), physical health (D2), life satisfaction (D3), perceived overall quality of life (D4), public health expenditures (D5), active (environmental) stewardship and citizenship (D6).

This perspective essay also proposes several research propositions, which translate the relationships between antecedents and consequences:

*P1- The long-term exposure of individuals to green spaces (parks, gardens or forests) has a positive impact on physical and mental health.*

*P2- The long-term exposure of individuals to blue (rivers, lakes or seascapes) has a positive impact on physical and mental health.*

This conceptual paper also found theoretical evidences that two other dimensions could be added to the framework, highlighting the short-exposure spiritual and sensation seeking experiences and considering a more active approach from individuals.

*P3- The short-term exposure of individuals to spiritual, introspective and transformative experiences has a positive impact on physical and mental health.*

*P4- The short-term exposure of individuals to sensation seeking and self-achievement experiences has a positive impact on mental health but may also imply some risks to physical health.*

The influence of landscape is only one factor among other environmental conditions. Other causal pathways resulting from poor environmental conditions also influence the population health (Pineo et al., 2018). Throughout the literature review, several user-related variables were identified as important moderators (see Table 1).

*P5a,b - This positive impact is a) directly or b) indirectly moderated by several socio-demographic and psychographic individual variables (gender, age, income, personality, etc.)*

Van Cauwenberg et al. (2011) made a systematic literature search with 31 articles. Results were inconsistent but most of the studied environmental characteristics were reported not to be related to physical activity (PA).

*P6a,b- This positive impact of therapeutic landscapes is mediated by behavioral individual variables such as: a) physical activity (related with the propensity for outdoor activities) or b) the time of exposure/frequency of visit.*

There are also contradictory evidences about the correlation of physical activity of older adults with place related moderators, such as urban walkability, aesthetics, safety or access to services and others listed on Table 2 (Van Cauwenberg et al., 2011).

*P7a,b,c- Other quality-of-life areas (eg. health infrastructures, walkability, seascape area, green space area or leisure and cultural activities) can: a) directly influence health; indirectly influence health by moderating b) the access to blue and green spaces or c) the physical activity.*

*P8a,b,c- The scenic quality or beauty of those landscapes (green or blue) moderates the impact of places on physical and mental health. (Poor quality green and blue spaces have a reverse effect) through a direct effect (a), or an indirect effect on frequency of visit (b) or on the behavioral outcomes (c).*

*P9a,b,c- This positive impact of therapeutic landscapes is moderated by place climate characteristics (eg. temperature, humidity, altitude, etc) through a direct effect (a), or an indirect effect on frequency of visit (b) or on the behavioral outcomes (c).*

*P10- The attributes of therapeutic landscapes are influenced by climate change and other uncontrollable natural processes.*

*P11- The therapeutic benefits of blue and green areas on psychological wellbeing also impact positively physical health and satisfaction with life.*

*P12- The positive community/user health related outcomes also have a positive impact on perceived overall quality of life and the reduction of public health expenditures.*

However, the analysis does not consider other issues such as the influence of other socio-demographic variables such as the benefits of thermal springs (Serbulea & Payyappallimana, 2012) or the benefits of travelling for the increase of life expectancy.

**Table 1. User Related Moderators and Control Variables**

User-related Moderator/ Controls	Green & Blue Spaces	Moderating Effect
Gender	De Bell et al. (2017) Nutsford et al.(2016)	Women were more likely to select physical activity than psychological benefits as the single most important benefit.
Age Group	De Bell et al. (2017) Finlay et al., (2015) Nutsford et al.(2016)	Benefits were relatively greater for older people compared with younger people
Socioeconomic status	De Bell et al. (2017) White et al. (2017)	Predictor of both frequency and location of visits and was also associated with identifying social interaction as the most important benefit.
Number of dependent children	De Bell et al. (2017) White et al. (2013)	Users without children were less likely to report social interaction than psychological benefits
Education	Wheeler et al. (2012) White et al. (2013)	
Income	Nutsford et al.(2016) Wheeler et al. (2012) White et al. (2013)	Negatively associated in Kessler Psychological Distress Scale (k10)
Employment status	White et al. (2013,2017) Wheeler et al. (2012) Van den Berg et al., 2015	Associated with life satisfaction
Personality	White et al. (2013)	
Ethnicity	White et al. (2017) Pearson et al. (2017)	Associated with life satisfaction Not significant correlation with blue exposure
Neighborhood population density	Nutsford et al.(2016)	Negatively associated in Kessler Psychological Distress Scale (k10)

Deprivation	Nutsford et al.(2016) White et al. (2017)	Not significant
School Deprivation	Pearson et al. (2017)	Children from the most deprived schools had significantly higher rates of blue space exposure
Housing Quality	Nutsford et al.(2016) White et al. (2013)	Negatively associated in Kessler Psychological Distress Scale (k10)
Cohabiting/marital status	De Bell et al. (2017) White et al. (2013)	Single respondents were less likely to report exercise than psychological benefits
Dog ownership	White et al. (2017)	Associated with life satisfaction
Frequency of visit	De Bell et al. (2017)	Positively correlated
Coastal proximity	Gascon et al. (2017) Pearson et al. (2017) Wheeler et al. (2012)	Positively correlated with frequency of visit Not significant correlation with blue exposure
Perceived walking distance to fresh water blue space	Völker et al. (2018)	Negatively correlated with frequency of visit
Car ownership	De Bell et al. (2017)	Correlated with frequency of visit
Commuting time	White et al. (2013)	
Health status Disability status	De Bell et al. (2017)	Respondents who did not have a limiting long term illness were more likely to report physical activity than psychological benefits
Weight Status/ Obesity	Pearson et al. (2017)	Not significant correlated with blue exposure
Stress level	Gascon et al. (2017)	Positively correlated with frequency of visit
Place attachment	Gascon et al. (2017)	Positively correlated with frequency of visit
Urbanity/ Location	De Bell et al. (2017)	Predictor of both the frequency and location of visits to blue space

Source: Own Elaboration

#### 4.2 Recommendations for Place Managers and Developers: The Proposed “Governance Support System”

Ng (2016) claimed for the “right to healthy place-making and well-being”. According to this author (p.3) “human settlements should “grow” naturally out of the ecosystem, providing their residents with plenty of opportunities to contact nature through a network of blue-green (water and open space) infrastructure”. Armed with a better understanding of factors promoting a healthy ageing, local governments are positioned to make infrastructure changes and public policies that prioritizes creating and maintaining blue and green spaces would serve to facilitate everyday access to these nurturing spaces.

Table 2. Place-related Moderators and Control Variables

Place related Moderator/ Controls	Reference	Effects
Climate conditions (reduction of extreme temperature)	Gascon et al. (2017)	Positively correlated with frequency of visit
Crime Safety	Nutsford et al.(2016) Van Cauwenberg et al. (2011) Wheeler et al. (2012)	Positively correlated with frequency of visit Negatively associated in Kessler Psychological Distress Scale (k10)
Physical Activity (PA)	Van Cauwenberg et al. (2011)	Correlation Not significant
Walkability x PA	Van Cauwenberg et al. (2011)	Correlation Not significant
Residential density x PA	Van Cauwenberg et al. (2011)	Correlation Not significant
Land use mix x PA	Van Cauwenberg et al. (2011)	Correlation Not significant

Access to services x PA	Van Cauwenberg et al. (2011)	Correlation Not significant
Access to public transport x PA	Van Cauwenberg et al. (2011)	Correlation Not significant
Access to recreational services x PA	Van Cauwenberg et al. (2011)	Positively correlated

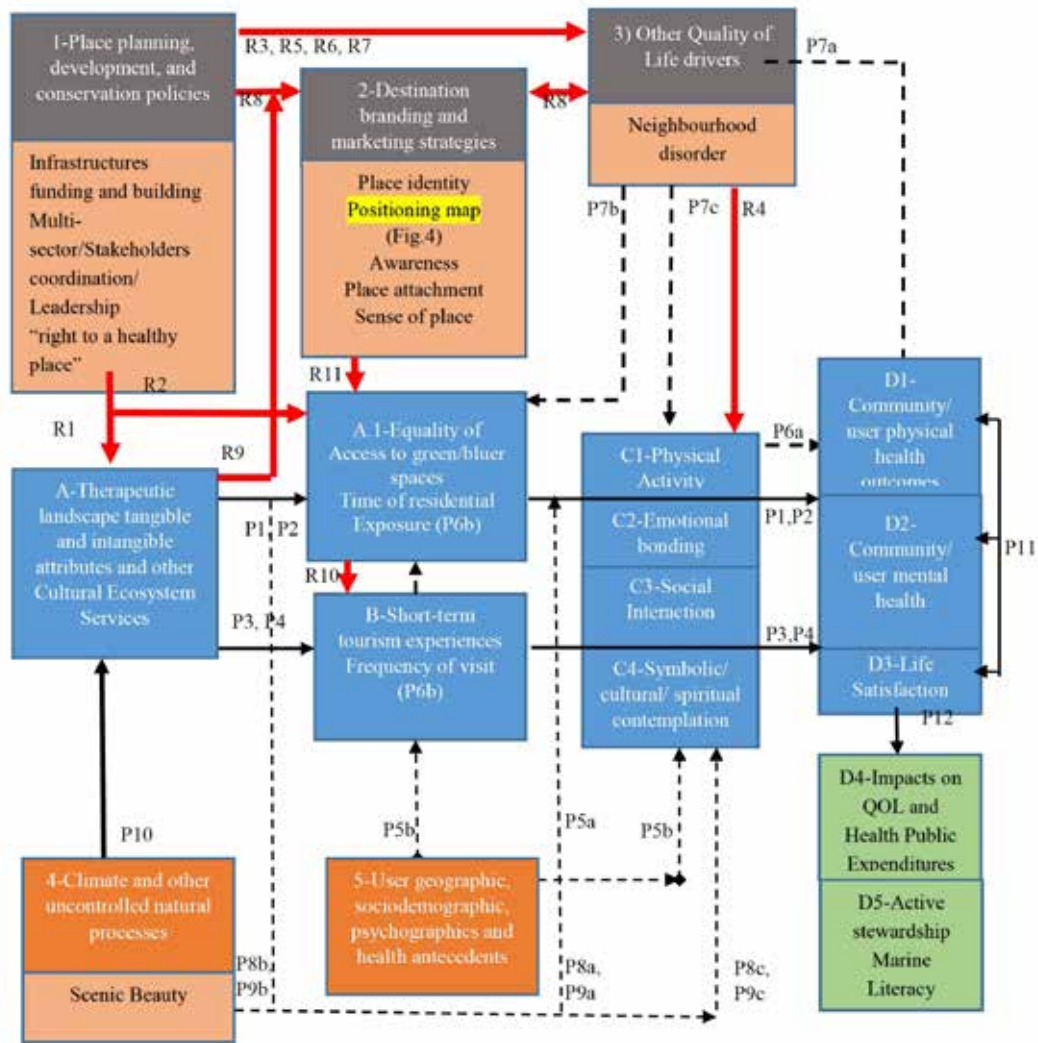
Source: Own Elaboration

Urban planners, architects, maritime authorities and other built environment professionals face a number of challenges when seeking to address health objectives through urban policy and development (Grant et al., 2017). This paper provides a list of recommendations and an agenda oriented to place managers/developers and policy makers that are graphically represented in *Figure 5* as R-arrows:

*Recommendation R1- Infrastructure building plan:* There are several examples of cities that have built infrastructures such as artificial lakes (e.g. Tuzla Pannonian Sea, or Palm Jumeirah Island in Dubai), beaches (e.g. Barceloneta) or promenades (Völker & Kistemann, 2013) as innovative solutions to requalify deprived or polluted areas and provide cities with new leisure and recreational zones. Interventions do not need to be large-scale, installing smaller features, such as a small garden plot or courtyard fountain, can also positively influence adults' quality of life (Finlay et al., 2015); The quality of the water must be assured (De Bell et al., 2017);

- a) *Recommendation R2- Equal access to green/blue spaces:* Social inequalities and physical barriers that inhibit the access to green and blue areas must be removed by improving public transports alternatives, safety and walkability (Hansen-Ketchum et al., 2011; Wüstemann, Kalisch & Kolbe, 2017); or by increasing the proportion of affordable homes in locations with oceanic views (Nutsford et al., 2016)
- b) *Recommendation R3- Assure the quality of health infrastructures and services;*
- c) *Recommendation R4- Promote the quality of the social interactions between users and nature,* through design and organization of recreational and cultural activities.
- d) *Recommendation R5- Promote the ecological and marine literacy and citizenship* (Hansen-Ketchum et al., 2011);
- e) *Recommendation R6- Adopt inter-sector governance* in order to increase synergies and opportunities: a walking path along a river could provide opportunities to walk to school or work while experiencing the restorative qualities of the natural world, a community vegetable garden could enable people of all incomes to secure healthy food, and a transportation infrastructure project could support the creation of a safe biking path along a rural highway (Hansen-Ketchum et al., 2011);

Figure 5. Proposed Theoretical Framework for the Salutogenic Health System (black arrows) and the Governance Support System (red arrows)

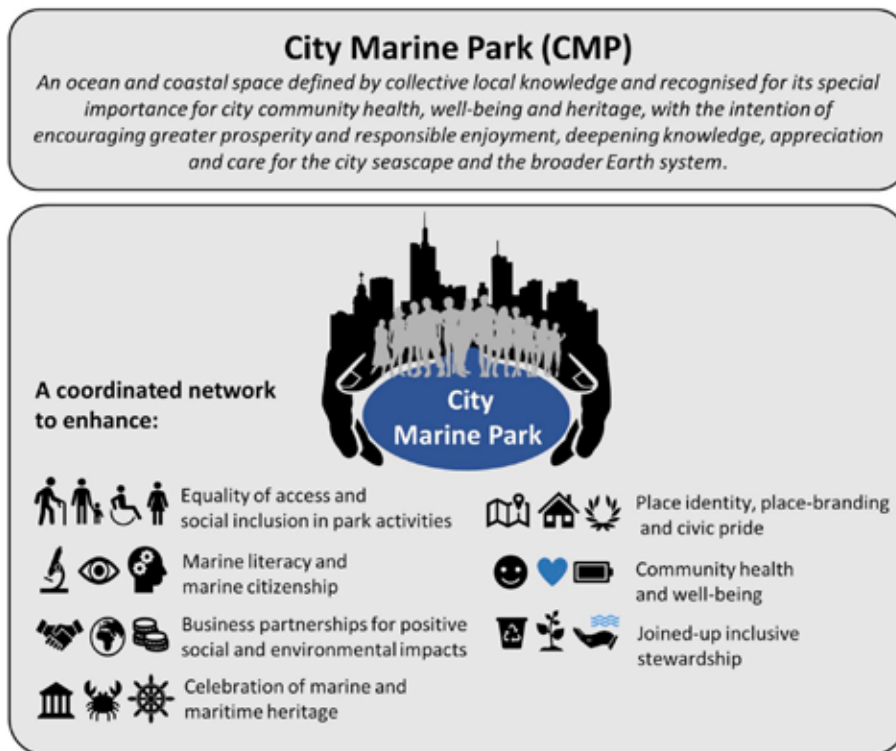


Source: Own Elaboration

More recently, Pittman et al. (2019: 102) expressed that the “growing concern over human impacts upon coastal waters and global strategic goals for healthier cities requires that coastal cities develop innovative ways to inspire and empower communities to embrace and cherish city seascapes”. Their paper proposes a collaborative *community-led marine park* (CMP) concept (see Figure 6) that “celebrates a city’s connection to the marine environment, enhances sustainable economic prosperity and enables communities to participate in activities that deepen understanding, value, care and enjoyment of the city seascape”.

The CMP is a coordinated network that aims to enhance several goals: equality of access and social inclusion in park activities; marine literacy and marine citizenship; business partnerships for positive social and environmental impacts; celebration of marine and maritime heritage; place identity, place branding and civic pride; joined-up inclusive stewardship. Thus, CMP aims to enhance the community health and wellbeing, by increasing the physical activity and reduce the stress of their inhabitants.

Figure 6. CMP Collaborative Community-Led Marine Park Framework



Source: Pittman et al., (2019:162)

### 4.3 Recommendations for Place Branding and Marketing Organizations

Place brands provide a framework for local citizens and visitors to experience a place as well as an agenda for politicians to allocate resources. Place brands function not only as a marketing slogan but also as a strategic political vision, shaping the framework in which local citizens and visitors experience a place (Gulsrud, Gooding & van den Bosch, 2013).

Place identity usually embodies the unique attributes and competitive advantages of places and aims to meet the strategic needs of the place stakeholders (*Recommendation R8*). The place identity must be aligned with brand positioning (*Recommendation 9*) (see Positioning Map of *Figure 4*) and translate a narrative of positive nature-based sensory experiences into a single-minded, compelling and unique visual communication (Porter, 2013):

1. The health benefits from therapeutic landscapes (Valls et al., 2017) thus generating new business opportunities like wellness/medical tourism (Tooman, 2013);
2. The therapeutic landscape quality (green or blue), especially exploring the scenic attributes; 3) innovation in designing tourism experiences appealing for spiritual or self-achievement motives (*Recommendation R10*).

Moreover, some case-studies of destination branding and place identity building were found, representing the exploration of market niches for the therapeutic destinations proposed on the positioning map of *Figure 4*.

- a) Brand positioning in wilderness of Iceland (Ólafsdóttir & Runnström, 2011), or the Kimberley coast in Western Australia (Pearce, Strickland-Munro & Moore, 2017);
- b) The pilgrimage route of “Camino de Santiago” (Kim, King & Kim, 2016) or Kumano-kodo in Wakayama, Japan (Kato & Prozano, 2017);
- c) The dark tourism destinations such as Memorial of the Victims of the Nanjing Massacre in China (Zheng et al., 2016);



Furthermore, as a last *Recommendation (R11)*, place marketing decision-makers should develop innovative target-oriented communication strategies (for residents, tourists and other stakeholders) aiming to increase the awareness of therapeutic landscapes and the marine literacy and consequently the exposure and frequency of visit.

However, Tobias and Wahl (2013) concluded that place branding can hardly support landscape conservation in city-regions. Landscape can only become a brand of a place, if it is abundant, unique and the only real strength of the place. These authors argued that landscape and green spaces play the same role as the streetscapes of a city. Unattractive landscape or green spaces are strongly perceived in the negative way; contrariwise, their attractiveness is not appreciated as strength of the place. In the same year, Gulsrud, Gooding, van Den Bosch (2013) also concluded that biophysical assets such as green spaces were not in focus in Danish municipalities place branding campaigns.

The health-based branding strategies can be extended larger geographic scales like Blue Mountains region of New South Wales, Australia (Porter, 2013) or beach towns (Valls et al., 2017). The literature provides already some case-studies of cities such as Vancouver – “Healthy city for all” (Veal, 2017) linked to green leadership (Affolderbach & Schulz, 2017), Cologne/Dusseldorf (Völker & Kistemann, 2013), or cities’ networks such as Portuguese Health Cities Network comprising 57 cities, that use health as corner stone of their marketing and positioning strategy.

Furthermore, there are some research organizations that measure and compare cities’ health status: US Healthiest cities and counties, (<http://www.healthiestcities.org/>) or the WHO European Cities Network. Several other instruments were developed to measure the level of cities health (Lowe et al., 2015), selecting green space area (hectares per 100.000 population) or green land use as a core indicator: the WHO European Healthy Cities Network comprising a set of 32 healthy city indicators (Webster and Sanderson, 2013); the Green City Index ([www.siemens.com/greencityindex](http://www.siemens.com/greencityindex)); or the Building Research Establishments Healthy Cities Index (BRE- HCI) with 58 indicators (Pineo et al., 2018).

This conceptual paper provided two theoretical frameworks for mapping and branding places, adding the place management and marketing perspectives to a research topic usually explored by social medicine and environmental psychology disciplines. Author hopes they will inspire place brand managers, public decision makers, tourism operators and researchers involved in this complex research topic.

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