

FRANCOANGELI/Metodi del Territorio

---

# **Insediamenti turistici costieri e sostenibilità Progetti di rigenerazione**

a cura di  
Paola Pittaluga



I paesaggi costieri sono sempre più interessati da processi di urbanizzazione e trasformazione tanto da essere profondamente alterati nelle caratteristiche fisiche e morfologiche, nella qualità e identità.

Accanto a insediamenti per la vacanza progettati nei minimi dettagli, villaggi ipercurati e ipergestiti, talvolta spinti fino a consentire ai fruitori di vivere una finzione acontestuale e atemporale, convivono aree trasandate, casuali, anonime e degradate, periferie della città turistica. Un patrimonio che non può essere abbandonato a se stesso e ignorato dalle politiche ambientali di tutela delle coste. Richiama anzi un progetto di spazio pubblico se si assume che, oggi, l'ambiente e il paesaggio, spazi eminentemente e immanentemente pubblici, siano forse gli unici rimasti.

I contributi presenti nel volume, attraverso la descrizione di esperienze attuali o passate, italiane e internazionali, invitano ad una riflessione su questi temi e sottolineano la necessità di pensare un progetto di rigenerazione sostenibile dei paesaggi e degli insediamenti turistici costieri che tenga conto sia degli aspetti ambientali, legati per esempio ai "rischi ambientali", sia di quelli sociali legati alla "mercificazione" tipica dei luoghi del *loisir* quando sono le tecniche di marketing a guidare la progettazione degli spazi per il turismo, allo scopo di aumentare il valore percepito dall'utente.

Emergono differenti declinazioni del progetto che contrastano forme di organizzazione spaziale e azioni che tagliano i rapporti con il territorio, prive di identità e discendenti da logiche privatistiche dello spazio, privilegiando invece funzioni, usi e attività coerenti con il contesto locale, progettate e gestite collettivamente, nella convinzione che non c'è sostenibilità senza una collettività, un insieme di soggetti che hanno a cuore il futuro del proprio spazio di vita e di quello delle generazioni a venire.

*Paola Pittaluga* è professore associato di Tecnica e pianificazione urbanistica presso l'Università degli Studi di Sassari, Dipartimento di Architettura, Design e Urbanistica, dove insegna Pianificazione ambientale. Tra i suoi ultimi lavori più significativi figurano "Landscape as a Common. Collective Protection and Management", in S. Serreli (ed.), *City Project, Public Space*, Springer (2013); "Tutela ambientale e progetto del territorio: integrare, incrementare, interagire, interpretare", in E. Cicalò (a cura di), *Disegnare le dinamiche del territorio. Trasferimento tecnologico e informazione territoriale*, FrancoAngeli (2015); "Plan and Project as Resistance Strategies. Didactics, Planning and Designing in a Continuous Changing Era", in *City, Territory and Architecture*, n. 3 (2016).



# Metodi del Territorio

Collana fondata da Fernando Clemente e diretta da Giovanni Maciocco

## *Direttore di collana*

Giovanni Maciocco

## *Comitato scientifico*

Michael Batty

Dino Borri

Arnaldo Cecchini

Xavier Costa

Francesco Indovina

Carlo Olmo

Pier Carlo Palermo

Nuno Portas

Bernardo Secchi

Thomas Sieverts

Ray Wyatt

## *Comitato editoriale*

Paola Pittaluga

Gianfranco Sanna

Silvia Serreli

Francesco Spanedda

## *Progetto Grafico*

Samanta Bartocci

Enrico Cicalò

Giuseppe Onni

Michele Valentino

## *Managing Assistants*

Laura Lutzoni

Monica Johansson

Questo volume è stato realizzato grazie ai fondi della Regione Autonoma della Sardegna ai sensi della Legge regionale 7/2007 con i quali è stata realizzata la ricerca dal titolo *Prospettive di rigenerazione degli insediamenti turistici costieri e sostenibilità*, di cui qui sono riportati parte dei risultati.



REGIONE AUTONOMA DE SARDIGNA  
REGIONE AUTONOMA DELLA SARDEGNA

Copyright © 2018 by FrancoAngeli s.r.l., Milano, Italy.

Ristampa

Anno

Ristampa	Anno									
0 1 2 3 4 5 6 7 8 9	2018	2019	2020	2021	2022	2023	2024	2025		

L'opera, comprese tutte le sue parti, è tutelata dalla legge sui diritti d'autore.

Sono vietate e sanzionate (se non espressamente autorizzate) la riproduzione in ogni modo e forma (comprese le fotocopie, la scansione, la memorizzazione elettronica) e la comunicazione (ivi inclusi a titolo esemplificativo ma non esaustivo: la distribuzione, l'adattamento, la traduzione e la rielaborazione, anche a mezzo di canali digitali interattivi e con qualsiasi modalità attualmente nota od in futuro sviluppata).

Le fotocopie per uso personale del lettore possono essere effettuate nei limiti del 15% di ciascun volume dietro pagamento alla SIAE del compenso previsto dall'art. 68, commi 4 e 5, della legge 22 aprile 1941 n. 633. Le fotocopie effettuate per finalità di carattere professionale, economico o commerciale o comunque per uso diverso da quello personale, possono essere effettuate a seguito di specifica autorizzazione rilasciata da CLEARedi, Centro Licenze e Autorizzazioni per le Riproduzioni Editoriali ([www.clearedi.org](http://www.clearedi.org); e-mail [autorizzazioni@clearedi.org](mailto:autorizzazioni@clearedi.org)).

Stampa: Global Print s.r.l., Via degli Abeti n. 17/1, 20064 Gorgonzola (MI)

## Indice

<b>Paesaggi e insediamenti turistici costieri: prospettive di rigenerazione</b> <i>di Paola Pittaluga</i>	pag.	7
<b>Architetture adattive e dinamiche ambientali della città costiera</b> <i>di Gianfranco Sanna, Silvia Serreli</i>	»	16
<b>Images, imageries and landscape transformations</b> <i>di Enrico Cicalò</i>	»	34
<b>Rigenerazione sostenibile degli insediamenti turistici costieri. Alcune prospettive emergenti</b> <i>di Salvatore Carta, Paola Pittaluga, Francesco Spanedda</i>	»	42
<b>Sustainable architecture and planning in a coastal landscape between heritage and collective management</b> <i>di Francesco Spanedda, Paola Pittaluga</i>	»	74
<b>Il ruolo del turismo nella ri-qualificazione dei paesaggi costieri</b> <i>di Cristian Cannaos</i>	»	105
<b>Il sistema degli insediamenti turistici in Sardegna: accessibilità e potenziale evolutivo urbano</b> <i>di Tanja Congiu, Gianluca Melis</i>	»	117
<b>Ambienti costieri e insediamenti turistici</b> <i>di Samanta Bartocci, Michele Valentino</i>	»	135

<b>Paesaggi costieri e modelli turistici: il progetto dello spazio tra tutela e produzione</b> <i>di Laura Lutzoni, Stefania Nudda</i>	pag.	149
<b>Paesaggi turistici costieri e rigenerazione sostenibile: il caso di studio di Capo Mannu nel Sinis</b> <i>di Giuseppe Onni</i>	»	176
<b>Review of the coastal tourist city and its landscape. The case of Playa del Inglés in Gran Canaria</b> <i>di Omar Sosa García</i>	»	197
<b>Spazi pubblici costieri e riorganizzazione dei litorali</b> <i>di Giovanni Maria Biddau, Gianfranco Sanna</i>	»	209
<b>Effogo: A master plan open to changes</b> <i>di Vicente Mirallave, Flora Pescador, Jin Taira</i>	»	225

## *Paesaggi e insediamenti turistici costieri: prospettive di rigenerazione*

di Paola Pittaluga\*

### **1. Paesaggi turistici costieri e sostenibilità**

Nell'ultimo secolo il fenomeno turistico è cresciuto a dismisura, si è modificato di continuo per forme e mete in risposta alle trasformazioni della società e della domanda.

Il turismo balneare, in particolare, ha contribuito, talvolta in modo preponderante, allo sviluppo economico di molte aree marginali del Mediterraneo, diventate poi centrali grazie ad esso, ma ha, al tempo stesso, compromesso buona parte dei paesaggi costieri (Battigelli, 2007).

L'utilizzo eccessivo dei suoli, la trasformazione dei paesaggi locali in "prodotti desiderati" (Vos, Meekes, 1999), la standardizzazione delle forme, la decontestualizzazione culturale, la voluta "seduttività" dei luoghi da visitare, i luoghi considerati come oggetti di consumo, la creazione di icone ad uso e consumo del turista e la "citazionalità" culturale forzata, sono tra gli aspetti negativi delle forme turistiche contemporanee.

Di conseguenza, la tutela, la trasformazione, la gestione dei paesaggi turistici costieri è un oggi tema centrale in più campi disciplinari: richiama l'attenzione sugli interventi, sui rischi ambientali, sulla capacità di carico, sul turismo, sulla conservazione del paesaggio e degli habitat naturali.

Ma qualunque sia il punto di partenza la parola chiave è sostenibilità, parola ambigua perché da declinare in funzione del contesto

Non a caso proliferano le definizioni<sup>1</sup>.

La sostenibilità delle forme turistiche mette in forte risalto sia la sostenibilità economica, sia l'ecocompatibilità.

\* Dipartimento di Architettura, Design e Urbanistica, Università degli Studi di Sassari, sede di Alghero. pittaluga@uniss.it

<sup>1</sup> Per una breve rassegna delle più importanti vedi Onni (2012).

- Bethemont J. (2000), *Géographie de la Méditerranée*, Colin, Paris.
- Boyer M. (1999), *Histoire du tourisme de masse*, Pus, Paris.
- Burnley L., P. Murphy (2003), *Seachange*, UNSW Press, Sydney.
- Butler R.W. (1980), "The concept of the Tourist Area Life-Cycle of Evolution: Implications for Management of Resources", *Canadian Geographer*, 24(1), pp. 5-12.
- Corajoud M. (2003), "Autoportrait. Le paysage: une expérience pour construire la ville", in Aa.Vv., *Michael Corajoud et cinq grandes figures de l'urbanisme*, Ed. de la Villette, Paris, pp. 15-41.
- European Environment Agency (EEA) (2006), *The Changing Faces of Europe's Coastal Areas*, 6, EEA, Copenhagen.
- Ferrari F. (2008), "Turismo e sviluppo economico", in M. Fuschi (a cura di), *Il Mediterraneo. Geografia della complessità*, FrancoAngeli, Milano, pp. 242-291.
- Forman R.T.T. (2010), "Coastal Regions: Spatial Patterns, Flows and a People Nature Solutions from the Lens of Landscape Ecology", in M. Mininni (a cura di), *La costa obliqua. Un atlante per la Puglia*, Donzelli Editore, Roma, pp. 249-265.
- Guidicini P. (a cura di) (2000), "Luoghi" *metropolitani. Spazi di socialità nel periurbano emergente per un migliore welfare*, FrancoAngeli, Milano.
- Hackens T. (1997), "Le paysage culturel Méditerranéen: lecture synthétique et leçon d'humanisme", in Aa.Vv., *Il paesaggio mediterraneo: segno della storia, messaggio della civiltà, Centro Internazionale di studi sul paesaggio mediterraneo, Atti del convegno Capri, 13-15 ottobre 1995*, Ed. Crea, Napoli, pp. 471-485.
- Lefebvre H. (1974), *La Production de l'Espace*, Anthropos, Paris.
- Pittaluga P. (2006), "Aree di bordo: possibilità di integrazione e coevoluzione", in G. Macciocco, P. Pittaluga (a cura di), *Il progetto ambientale in aree di bordo*, FrancoAngeli, Milano, pp. 35-53.
- Secchi B. (2006), *La città del ventesimo secolo*, Laterza, Roma-Bari.
- Siza Á. (1986), "Premessa", in Aa.Vv., *Álvaro Siza. Professione poetica*, Electa, Milano, pp. 6-9.
- Siza Á. (1998), *Immaginare l'evidenza*, Laterza, Roma-Bari.
- Smith V., Eadington W. (eds) (1992), *Tourism Alternatives: Perspectives on the Future of Tourism*, University of Pennsylvania Press, Philadelphia.

## Effogo: A master plan open to changes

di Vicente Mirallave, Flora Pescador, Jin Taira\*

### 1. Context

The Effogo project fits into a form of research undertaken in recent years by our work group, in what some define as "research by design", where learning experiences are intertwined with the researching experience and with the projective one, in order to organize an interlaced map, deepening the expertise of architecture, urbanism and landscape. It is in this sense that we have been observing how in the experimental research, the project, the act of creation, is defined through processes of progressive improvements that test design product constantly, improved from the experience of material innovations, collaborative synergies, technological advances, etc.

In this way, a knowledge occurs always in progression and cumulative-ness, expressing the culture of the any moment and at the same time it configures it, following both top-down processes, especially in the case of Fogo, and bottom-up processes (Pescador, Mirallave, 2015; Taira, Pescador, Mirallave 2015).

If the act of project has an iterative direction, that involves an ongoing back and forward reasoning of proposal and critique, of analysis and synthesis, in the case of Effogo this has been absolutely necessary since the recent eruption of Fogo volcano, which gives name to the island, burst abruptly through the process of project in November 2014.

The disaster placed the uncertainty and the enormous force of nature as fundamental parts of the basic structure of a working method. A conceptual thought designed specifically to address the event; not only to respond to the problems of territorial planning of the site, but also as a unique opportunity to establish a model of intervention which methodically could be applied in

\* MPC Architects. [www.mpc-arquitectos.com](http://www.mpc-arquitectos.com). [vmi@mpc-arquitectos.com](mailto:vmi@mpc-arquitectos.com), [fpm@mpc-arquitectos.com](mailto:fpm@mpc-arquitectos.com), [jin@mpc-arquitectos.com](mailto:jin@mpc-arquitectos.com).

other islands of the archipelago of Cape Verde or elsewhere with frequent volcanic activity.

This experience was a unique opportunity to lay out different future scenarios from a dynamic natural evolution of a territory that allows the observation of a daily change that allows working directly with the proposition, with the project as a producer of continuous knowledge (Viganò, 2012).

Working this changing process from the development of such a powerful toolkit as the diagrams means to generate an operative selection of concepts, that departing from their spatial or temporal relationships, builds project strategies that, thanks to its power of abstraction and its generative capacity of implicit proposition of strategies, serves to reveal the existence of architecture and urbanism of its own reasoning that separate itself from the production of unique objects to focus on defining strategies and spatial and temporal processes as a true tactical thinking.

Also Murray Fraser (Fraser, 2014) comments how the definition of research in architecture has changed in recent years towards the incorporation of the processes that lead to new ideas shared effectively. This definition, in his opinion, integrates the design of architecture in this activity that could be described as a result of research processes in the creation of projects.

Obviously, architecture, urbanism and landscape belong to fields with a core of strong specificity, but also with generously epistemological limits, especially due to its environmental, social, economic and technical implications. This situation of multiple interactions has led to a large aperture of approaches in research, always enlightening, in the way that they provide a broad and multidisciplinary vision, absolutely necessary. This is not an obstacle to demand a knowledge and a know-how from a frame centered in the relevance of its own and specific procedures, especially those that has related historically a way to research, produce knowledge and conceive processes between "logic and poetry" (Martín, 2001).

## 2. Project

Cape Verde currently presents a significant economical growth due to the emergency of tourism. It represents the 25% of the national GDP (2013), with an average annual growth of 17%. Recently, the Government has approved several laws, regulations, and plans to control the impacts of this new scenario, such as the Strategic tourist plan (2010/13) or the Tourist marketing plan (2010/11).

A sustainable plan of tourism is requested by Cape Verdean authorities as a model of intervention that could be applied in the whole archipelago. The

Island of Fogo is selected according to its specific offer in ecotourism, culture and sport tourism.

Due to its similarities with the natural conditions of the island of Lanzarote, and its sustainable and art tourism strategy approach, the Canarian Island is taken as a successful model to study as a potential direction of intervention.

In 2013, a multidisciplinary team lead by professors of the School of Architecture of La Universidad de Las Palmas de Gran Canaria (ULPGC), received the commission to produce a Sustainable Tourism Master Plan in the Island of Fogo, Cape Verde.

The emergency of the tourism in the island of Fogo is caused not only by its unique geomorphology as the tallest island of the world in relation with its surface, but scientific tourism due to its volcanic activity; ecotourism due to its richfull ecological environment; gastronomic tourism due to its unique wine, coffee, cheese and tropical fruits; culture tourism due to its architecture typology of *sobrados* in the capital of the island São Filipe, its music and festivals; and sport tourism in hiking and climbing.

After almost 20 years with no volcanic eruptions in the island, the optimistic scenario of economical growth was interrupted on November 23, 2014, when took place an eruption in the island that lasted until February of 2015. The damage cost estimation of more than 50 million euros forced a new direction in the master plan according to the new scenario.

A master plan for sustainable tourism becomes a potential guide for emergency, rehabilitation, recovery and reconstruction of an island. A sustainable economical approach becomes an environmental sustainable and resilience approach. A top-down design strategy becomes necessary reinforced with social participation and a bottom-up strategy pilot project.

## 3. Project/Resistance vs. Resilience

The project, initially focused in the guidance and methodologies of the United Nations World Tourism Organization and the sustainable principles of the ecotourism defended by the International Ecotourism Society, in order to minimize environmental and social impacts; increase awareness and respect for the environment and culture; provide positive experiences for visitors and hosts, provide direct benefits for conservation; provide financial benefits and effective participation of local people; and increase the sensitivity of visitors towards the hosts political, social and cultural spheres; shifts its approach towards resilience of an island affected by volcanic activity with a return period estimated in 20 years.

#### 4. Object/tourism focus vs. integral transversality

Instead of a definitive project, the plan is defined as an open/pilot plan based in six objectives:

- *tourist market segments in a sustainable framework.* According to Cape Verde Government, the referential touristic islands are Sal and Boa Vista due to their Sun and Beach approach, following in relevance Santiago, São Vicente and Maio islands. Tourism is strongly linked to the specific characteristics of each island and Fogo, for instance, is strictly related to ecotourism, cultural and sports tourism. Cape Verde's tourism reached more than 500,000 tourists in 2012, with more than 3 million overnight stays the same year. On the other hand, the Marketing Plan for the Canary Islands (PROMOTUR, 2014) determines the Canarian target market categories in: sun and beach tourism; tourism of natural spaces; active tourism (sports); LGBT tourism (lesbian, gay, bisexual e trans-gender); MICE (large, small and medium meetings, incentives, conferences and exhibitions); weddings and honeymoons; cruise tourism. Canary Islands reached 13,3 million of tourists in 2015 (CEOE, 2016);
- *landscape structure as a tourist resource.* The project sets up a system of responses that are extended as an operational model of landscape territorial intervention, affecting the general territorial systems (mobility, open spaces, community facilities, and infrastructure), natural and protected landscapes, those for agro-sylvo-pastoral, and finally rural and urban settlements. The project therefore is setting up an extensive strategy to the whole perceptual context of the island;
- *sustainable mobility systems in the touristic context.* We bet on a system of compact core, whether rural or urban settlements, interconnected in an efficient network of sustainable mobility based on guaranteeing good accessibility to the island and the guarantee of an efficient public transport throughout its mobility network;
- *touristic centers as models of sustainable synergies.* Betting on the choice of a model based on the island art of Lanzarote, of natural wonders and its tourist conditioning;
- *pilot models of touristic typologies.* The project offers a comprehensive intervention system for the tourism sector, taking into account the materials to be used, their relative positioning, the modalities of intervention and their relative use;
- *sustainability applied to typological models.* Focuses its proposal on the efficiency of the tourism sector, not only in the economic management of providing technical arguments to a sector of great potential and developing, but in the necessary transversality of all economic sectors that

directly or indirectly affect the first, managing A balance that integrates all agents who build on Fogo Island's Cape Verde stage.

#### 5. Methodology/island scale vs. multiescalar

The Master Plan is structured in three scale frames.

##### 5.1 The archipelago scale

Comparative models between Cape Verde and Canary Islands. The *archipelago frame* is a parallel study between the insular groupings of Cape Verde and those of the Canaries, both inside the Macaronesian region and its approach of planning of territorial organization and its entailment to the tourism.

The archipelago of Cape Verde was discovered in the XV century and colonized by the Portuguese, being the first islands Santiago and Fogo. In Ribeira Grande de Santiago was established the first commercial post that served as a stopover for Portuguese ships for the slave trade. After its abolition in 1876 declines the commercial interest of the island that did not recover until the middle of century XX. In 1956 the PAIGC (African Party for the Independence of Guinea and Cape Verde) was founded, which in 1974 signed with Portugal the establishment of a transitional government in Cape Verde that would lead to the proclamation of its independence as a country a year later. Finally, in 1991, a turning point was created with the first democratic elections to the Cape Verde parliament.

In order to frame the study of the Pilot Project for a Sustainable Tourism Master Plan for Cape Verde, a study has been made of the main statistical data that directly or indirectly affect the study: the "Cape Verde economic and trade report" (2011) prepared by the Economic and commercial Office of Spain in Dakar, the data of the National Statistics Institute of Cape Verde, the report of the Cape Verde Tourism sector (2013) of Proexca, and the "Document on Support for planning of the energy and water Sectors for the sustainable development of Cape Verde" of the Pecave Project, prepared by the ITC.

Together with the Azores and Madeira, they constitute the Macaronesian region of the European Union. It constitutes the largest archipelago covering 7,242 square kilometers. Located only 15 kilometers from the African continent it has an arid and dry climate in the islands with lower altitudes such as the eastern ones of Lanzarote and Fuerteventura.



In steeper and more mountainous topographies the abrupt changes of temperatures that form cloud clusters in the altitudes from 900 to 1500 meters are presented.

All this leads to landscapes of great variability going from coastal desert environments to humid, lush mountain forests.

The Canary Islands, like Cape Verde, constitute a volcanic archipelago located in the Macaronesian region and colonized from the 15th century by the Spanish Crown.

With a mild and springy climate throughout the year, it has stable temperatures with an annual average of 21°C and 3000 hours of sunshine a year. It is one of the regions of the world with the greatest biodiversity of the planet and with a great variety of landscapes, reason why the Canary Islands has been carrying out actions aimed to achieve sustainable forms of development and respect to the environment.

In the present, Spain receives 83 million tourists/year (Ministry of Industry, Energy and Tourism, 2017), from which it obtains 77 thousand million euros (OMT, 2016). In the specific case of the Canary Islands, it receives 13.3 million tourists/year with profits of 14.6 thousand million euros.

### *5.2 The island scale: Fogo and Lanzarote tourist models*

Known as “Volcano Island” because it houses the only volcano with activity in Cape Verde (last eruption, until November 2014, took place in 1995), the Island of Fogo has a singular topography with conical format whose central element is a huge crater from which emerges the peak of the volcano that is 1,829 meters above sea level, becoming not only the highest point of the archipelago, but is the highest island in the world in relation to its surface.

The crater of Chã das Caldeiras, with 8 kilometers in diameter, is covered by lava traces of the previous eruptions, has a micro-climate that allows to produce the two most famous wines of the country. The brands “Chã” and “Solade” in addition to the traditional “Malecón”. In its perimeter stays the forest of Monte Velha, with its rich biodiversity, constituting an enormous potential both for the development of ecotourism, and for nature tourism and gastronomic tourism.

This region was designated as a protected area – the Natural Park of Bordeira/Chã das Caldeiras/Pico Novo, with 6,600 hectares – as a way to guarantee its preservation and potential for tourism in a sustainable and balanced way.

The specificities of the historical evolution of the island confer unique characteristics from the socio-demographic, cultural and architectural point

of view, highlighting the scenic beauty of the city of São Filipe with its typical “sobrado”.

The coastline with its black sand beaches (such as Bila Baixo Beach in San Felipe) and the deep waters, rich of biodiversity, also offer good opportunities for the development of diving, underwater fishing and medical tourism.

With a population of around 38.000 inhabitants, distributed in 3 councils with a strong dependence on emigration (especially to the US), the island of Fogo faces several limitations to its tourism exploitation. These include poor connectivity with other islands (either air or sea), insufficient general and tourist infrastructure, lack of skilled labor, and lack of a concerted strategy to promote and develop tourism on the island.

Lanzarote receives about 1.5 million tourists a year, that means 1.8 billion euros. With an area of 846 Km<sup>2</sup>, it is formed in a longitudinal form of orientation NE-SO that extends along 55Km by 18 wide. Despite the large number of volcanoes, its maximum height is 670m.

In addition to its important offer of Sun and Beach, the island of Lanzarote offers an important cultural offer through its Centers of Art, Culture and Tourism among which stand out the Jameos del Agua, the Cave of the Green, El mirador del Río or The Timanfaya National Park among others. His success in his policies of protection of his territory allowed him to obtain the title of Biosphere Reserve by UNESCO in 1993.

In a policy of sustainability and with the necessary pressure to improve its tourist offer, Lanzarote is committed to the diversification of its market while retaining its distinctive character. Among the new markets there are the Cruceros, Enoturismo in the field of Geria and Congresses. Potential health tourism expectations stand out, while the investments go to complementary services such as golf courses, shopping malls or new theme parks. «With intelligent programming and a clear awareness of what you want, you open a future full of possibilities as immense as you can ever imagine», (Manrique, 1988).

The creative work of César Manrique is linked to the impulse and support of the figure of the president of the Cabildo of Lanzarote, José Ramírez Cerdá (Martin, 1995), but above all to the sensitivity expresses a nature of devastating beauty and the consequent action of the Farmer of Lanzarote in communion with its ecological conditions and its inherent ingenuity to activate resources of survival in its territory.

Interest in the tourist aspects of Manrique and the potential of the island are manifested in the weekly Antena created in 1953. Faced with the tourist pressure generated by the emergence of interest generated by places like the Jameos or the Mountains of Fire active at Own Cabildo in the improvement

of infrastructures to condition and improve the accessibility conditions. In 1959 there is record of the first contribution of ideas for the works of the park of the city of Arrecife being Mayor Jose Ramirez.

The arrival of the Island Cabildo to the Cabildo Island would determine the growth of the island based on a firm belief in the potentialities and singularities of Lanzarote, and especially the “dream island” by Manrique (Martin, 1995).

In order to build the dream, in 1960 the Cabildo created its own construction company to undertake in its space of 10 years its own works or other instances of the administration.

In 1961 it illuminates the Cave of the Greens and it remembers the improvement of the Jameos of the Water. After detecting the access of up to 100 tourists/week in Mountains of Fire, it becomes clear the need to increase the hotel supply.

In 1962 it was agreed to transfer the land from the Town Hall of Haría to the Cabildo, a space where the Cueva de los Verdes and the Jameos del Agua are located, while the Guacimeta airfield is being built.

The following year road connections are planned, tourist sites are set up and studies are carried out for the declaration of the Fire Mountains, the Gulf, and the Mirador del Rio as areas of tourist interest, creating the Island Office of Tourism. In 1964 the execution of a runway of the Airport of 1,250 m is adjudicated by the Cabildo and it opens to the public two kilometers of the Cave of the Greens after the intervention of the artist Jesús Soto. In 1965 the water treatment plant started, and the Hotel Fariones is opened next to its access road.

In 1966 César Manrique returns from his American journey and joins the execution of the Jameos del Agua, his residence of Taro de Tahiche, the Casa Museo del Campesino and his monument to Fertility. It will be followed by the Devil’s Restaurant (1970), the Mirador del Rio (1973), the San José Castle Restoration (1976) and the Cactus Garden Works (1977-1990).

In these years aesthetic measures are adopted for the whole island, imposing the white color of the characteristic Mediterranean architecture, as unifying element in the walls of the buildings that are arranged on the territory and establishing a differentiation in the coloring of the carpentries according to the seas (blue) and in the interior (green).

Manrique works in a sense of formation and cultural information in Lanzarote, while he intervenes tirelessly in his work in the Cultural and Ecological Association “El Guincho” in order to control and monitor the economic growth and the consequent emergency of the speculation of the Island.

In 1992, he died in a traffic accident next to his residence converted in his last years in the Foundation César Manrique.

The two models are compared in order to obtain five strategies:

- integration of accessibility and mobility in the tourism sector;
- structuring the territory in tourism networks in cohesion with other economical vectors of the island;
- planning of tourist centers: natural, rural, urban, and as synergy spaces and economical attraction;
- draft an aesthetic regulation at territorial level;
- application of strategies for economic, social and environmental sustainability; especially in relation to the development of infrastructure systems of renewable energy what allow to emerge conditions for a sustainable tourism sector on the island of Fogo.

The result is a triple planning scenario based in a chronogram of time according to current conditions after the eruption of 2014-15.

At the territorial level, the pilot model of sustainable tourism proposes a sequence of temporary scenarios based on tourism growth that will slow down because of the eruption of 2014.

- *Scenario 1 – short term:* 1) the consolidation of the main access points to the island, guaranteeing other alternatives as a safety and emergency measure. From the existing road network, the North-South connection along Bordeira from its outer side is proposed; 2) the tourist networks based on the visit to the volcano will be affected, main element of tourist attraction of the island. It is necessary to strengthen and rebalance the tourist model of the same in order to minimize the impact on the tourism sector. It would be a priority to conceive of a new network structure, taking into account the new configuration of the Fogo Natural Park in which all the elements that allowed it to be in a tourist network of great economic potential have disappeared; 3) the definition of an aesthetic strategy at territorial level, is fundamental in the construction of a territory whose perceptive experience allows to propose a coherent landscape territory in all its scales; 4) control of the dispersion of the building in the rural area, and in protected spaces; 5) implementation of sanitation and solid waste treatment systems on the island, which not only affect landscape enhancement factors, but also affect the inhabitants directly and therefore tourists. Investment in renewable energies in water, sanitation and energy supply networks will be fundamental to ensure sustainable growth on the island, which will directly affect the emergence of tourism that can recover in the short term from the effects generated by the eruption.
- *Scenario 2 – medium term* (stability of the volcanological activity of the island): 1) implementation of the island’s new access points, including two coastal ports, planning the expansion of the Port to accommodate

cruises and the Airport. Predict the appearance of sports marinas in tourist and/or urban centers. Improve the conditions of the road and public transport; 2) establishment of a complex tourism network, diversified and unique, incorporating the visit to the volcano as one of the main attractions of a network of tourist attractions of nature, rural and urban; 3) planning of the nature tourist centers in a protected soil framework, including the reconversion of the Natural Park in a National Park, restoring the local economies in the outskirts in safer areas and controlled growth. Planning of tourist centers based on attraction activities located in safe areas that allow the integrated enjoyment of tourists and locals; 4) establishment of a differentiated system of architecture not only with aesthetic determinations according to the positional and climatic singularity of its settlement, but also to its applicability in relation to its energy efficiency; 5) improvement of the conditions of sustainability, incorporating the conditions to guarantee an efficient systems in the networks of supply, sanitation, treatment of residues and energy based on renewable energies.

- *Scenario 3 – long term* (stability of the volcanological activity): 1) to consolidate a system based on a system of accessibility and sustainable mobility flexible and intelligent, allowing it to accept changes in demand, to grow or to decline in response to changes in the market, technology and society; 2) to set up an increasingly complex and flexible network system that allows the possibility of establishing a vertebrate tourism model in the island's economy, being able to adapt at all times to the volatility of the ecological avatars of climate change, future eruptions, economic crises, social and political changes and new technologies; 3) to establish a system of centers and tourist attractions capable of adapting to changes in user demand in coordination with the ecological protection requirements; 4) to consolidate a constructive system of architectural intervention based not only on aesthetic code and of great efficiency, but also in the investigation of the use of materials that can be obtained; 5) to establish a coordinated and efficient system in the use of the infrastructures systems.

### 5.3 The architecture scale

Is developed under four perspectives:

- *typology models according to construction materials and finishing.* According to the traditional construction models of Fogo Island, there are three types of architecture. The construction of colonial character in the

urban nuclei in stone, plastered and painted (including the houses), prismatic construction in stone in the rural nuclei (with roofs in straw or tile), and the cylindrical construction in volcanic stone that exists in Chã Of the Boilers. In compliance with the general requirements of tourist facilities specified in article 20 of Chapter IV of Decree Law No. 34/2014, buildings must comply with the technical construction conditions required for fire-fighting, health, hygiene, noise and energy efficiency. We propose a model of architecture in urban ground finished plastered and painted in a range of colors that replicates the current color code. Roofs to four waters in tile or flat. It proposes a model of architecture finished in stone in the rural environment. In the rural settlements finished in roof in tile and in straw or wood in dispersed contexts. It proposes an architecture in natural environments prefabricated in laminated wood of easy assembly and disassembly. The roads and sidewalks are characterized by the use of the "Portuguese roadway" as the finishing of their urban and rural networks. While the asphalt has been incorporated into a stretch of the ring of about 40 kilometers that links S. Filipe with Mosteiros, it is expected that its use will be maintained on rural roads. It is therefore proposed to use the built environment in the urbanization, and in the configuration of a furniture in coordination: benches, bins, pergolas (including in the net of viewpoints), luminaries, rails, etc;

- *typology models according to relative position in the island, and renewable energy systems response.* A differentiated bioclimatic architecture is proposed, considering its relative position in latitude (littoral zone, middle zone, upper zone) and climate (arid, semi-arid, sub-humid, humid), in order to adapt to an efficient architecture, bioclimatic architecture with passive design strategies. It proposes an architecture that fuses with the use of renewable energies, whose behavior will be closely linked to complement those parameters of comfort that are not reached through passive design strategies;
- *typology models according to morphologies.* In compliance with the general requirements of the tourist facilities specified in article 20 of chapter IV of Decree Law no. 34/2014, tourist enterprises must have at least one unit for the use of persons with reduced mobility. Without prejudice to the previous premise, the facilities must attend to basic conditions of security of use and accessibility. Tourist resorts are understood as centers of autonomous facilities and buildings that may or may not include single-family, functionally interdependent units located in areas of territorial continuity, even if they are crossed by public or private roads, water lines and fringes affected by protection and conservation of natural resources, are intended to provide accommodation and complementary

services, where at least two types of tourism enterprises are integrated, one of them being a 4-5 star hotel establishment, including equipment of autonomous animation and a restaurant. These must have roads, parking areas, green spaces, reception, swimming pool and sports and leisure facilities. The parks for camping and caravans should be properly equipped with structures to allow the installation of shops, trailers, caravans and camper vans in addition to having the necessary equipment;

- *typology models according to specific usage.* The hotels are classified in Cape Verde according to the category of stars (from 1 to 5) according to the degree of comfort, positioning and level of services. The classification is national, as well as the standards of comfort and level of service varying from one country to another. They are usually based on objective criteria such as the size of the rooms, equipment of the bathrooms, television, swimming pool, etc. This classification is collected by the National Institute of Statistics of Cape Verde to classify the hotel establishments attending to 5 groups and categories.

## 6. Epilogue

The document is part of the *efficiency project*, whose objective is the recognition of the population of energy efficiency as an instrument of economic growth and social and environmental welfare. Within objective 1 of the *efficiency project* on the definition of efficiency targets and to provide an Energy Efficiency Agenda, it is proposed to create several deliverables. This document constitutes the fourth and most singular document of the works to be delivered. Not only because it is a project applied to a specific location and not generic like the rest.

First, it focuses its proposal on the efficiency of the tourism sector, not only in the economic management of providing technical arguments to a sector of great potential and developing, but in the necessary transversality of all economic sectors that affect directly or indirectly to the first one, managing a balance that integrates all agents that construct in scene of the Island of Fogo in Cape Verde.

Secondly, it incorporates all the normative documents that affect tourism in the country, from the last laws approved during the preparation of the document, strategic tourism plans, marketing plans, and the different management plans of the archipelago and the island.

Thirdly, it provides a comparative study with a model of tourism of previous success such as the Canarian stage, and specifically in the example of the island of Lanzarote as a model of Island-Art and Biosphere Reserve.

Likewise, warnings are established about the excesses of the model that become economic, social and environmental threats.

Fourthly, it provides a new diagrammatic and readable reading of the island, allowing to coordinate under all the layers of information, planning and territorial strategies foreseen in the pilot project (mobility, networks, free spaces, settlements, territorial sustainability).

Fifth, the project offers a comprehensive intervention system for the tourism sector, taking into account the materials to be used, their relative positioning, the modalities of intervention and their relative use.

Sixthly, the project provides a multiscale vision of sustainable strategies, from the territorial scale to the local scale where the activities of the tourism sector are developed.

Seventhly, the project sets up a system of responses that are extended as an operational model of landscape territorial intervention, affecting general systems (mobility, spaces, community facilities, and infrastructure), natural and protected soils, Agro-silvo-pastoral activities and finally to the soils of rural, urban settlement. Configuring in this way an extensive strategy to the whole context of perception of the island.

Eighth, the document is a project that not only provides a comprehensive vision of the application of sustainable tourism in the island of Fogo, but also introduces the need to incorporate a strategically planned and diversified vision of its tourism offer while enhancing at the same time their singularities.

The document is a pilot project and therefore not a final version. It is a brainstorm of ideas which is open for discussion and proposals for improvement.

It is an open and flexible document that looks for adaption to changes that could happen in the economic, social and cultural sectors and ecological emergencies that may arise. The project has to be considered as a newly established working instrument, which is presented to all of the relevant members of the team for its review and periodic adaptation as a plan of integral action and strategy. It is therefore a document that can be of prolonged use in time as an insight of an adapted and adaptable view on these issues depending on the views that the population living in the area and future population there have and want to transmit, always projecting on the future in a responsible manner.

## References

- Fraser M. (2013), *Design Research in Architecture: An Overview*, Ashgate, London.  
Manrique C., de Lucas J. R., Espinosa A., Higuera F., Nieva F. (1988), *Lanzarote. Arquitectura inédita*, Servicio de Publicaciones del Cabildo de Lanzarote, Lanzarote.

- Martín V. (2001), "Propuesta metodológica para la planificación del desarrollo sostenible en municipios turísticos: el ejemplo de Yaiza (Lanzarote)", in Aa. Vv., *IX Jornadas de Estudios sobre Fuerteventura y Lanzarote. Tomo II*, Cabildo Insular de Fuerteventura y Cabildo Insular de Lanzarote, Puerto del Rosario.
- Pescador F., Mirallave V. (2015), *Re\_Arch'Y: En architecture la recherche et le projet. Research and Project in Architecture. Research by design*, ULPGC & ENSAL Éditeurs, Lyon.
- Taira J., Pescador, F., Mirallave V. (2015), *EFFOGO*, Instituto Tecnológico De Canarias, Las Palmas de Gran Canaria.
- Viganò P. (2012), *Les territoires de l'urbanisme: Le projet comme producteur de connaissance*, MétisPresses, Genève.

---

*Metodi del territorio*  
fondata da F. Clemente e diretta da G. Maciocco

---

*Ultimi volumi pubblicati:*

- SILVIA SERRELI, PAOLO CALIDONI, *Città e formazione*. Esperienze fra urbanistica e didattica (disponibile anche in e-book).
- SAMANTA BARTOCCI, *Territori post-industriali*. Visioni per il futuro dell'ex cementificio (disponibile anche in e-book).
- LIDIA DECANDIA, LEONARDO LUTZONI, *La strada che parla*. Dispositivi per ripensare il futuro delle aree interne in una nuova dimensione urbana (disponibile anche in e-book).
- LAURA SAIJA, *La ricerca-azione in pianificazione territoriale e urbanistica* (disponibile anche in e-book).
- ENRICO CICALÒ (a cura di), *Disegnare le dinamiche del territorio*. Trasferimento tecnologico e informazione territoriale (disponibile anche in e-book).
- VALERIA SAIU, *Città tra Europa e Cina*. Globalizzazione e sostenibilità nella cultura urbana contemporanea (disponibile anche in e-book).
- VALENTINA TALU, *Qualità della vita urbana e approccio delle capacità*. Perché e come promuovere le "capacità urbane" degli abitanti più svantaggiati (disponibile anche in e-book).
- ENRICO CICALÒ (a cura di), *Progetto, ricerca, didattica*. L'esperienza decennale di una nuova Scuola di Architettura.
- GIOVANNI MACIOCCO (a cura di), *Città di città*. Il piano territoriale di coordinamento della provincia di Sassari (disponibile anche in e-book).
- DOMENICO CAMARDA, *Intelligenza spaziale e pianificazione*. Dalla governance ai multiagenti (disponibile anche in e-book).
- IVAN BLECIC, *Costruzione degli scenari per la pianificazione* (E-book).
- MARCO MARETTO, *Ecocities*. Il progetto urbano tra morfologia e sostenibilità.
- TANJA CONGIU, *Mobilità e progetto territoriale della città* (disponibile anche in e-book).
- GIOVANNI MACIOCCO, MARA BALESTRIERI, TANJA CONGIU (a cura di), *Il progetto urbano del territorio*. Il piano strategico della provincia di Sassari (disponibile anche in e-book).
- MARA BALESTRIERI, *Marginalità e progetto urbano* (disponibile anche in e-book).
- LIDIA DECANDIA, *L'apprendimento come esperienza estetica*. Una comunità di pratiche in azione.
- GIOVANNI MACIOCCO, GIANFRANCO SANNA, SILVIA SERRELI (a cura di), *The Urban Potential of External Territories* (disponibile anche in e-book).
- ALESSANDRO FONTI, *Paul Klee. "Angeli" 1913-1940*.
- ENRICO CICALÒ, *Immagini di progetto*. La rappresentazione del progetto e il progetto della rappresentazione (disponibile anche in e-book).
- ALESSANDRO PLAISANT, *La partecipazione nel governo delle trasformazioni del territorio*. Strumenti innovativi per costruire la città dei diritti (disponibile anche in e-book).