



**TESIS DOCTORAL**

**USO PÚBLICO DE LAS ÁREAS NATURALES PROTEGIDAS ESPAÑOLAS Y SU EFECTO  
SOBRE SUS ZONAS DE INFLUENCIA SOCIOECONÓMICA**

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“Habría que multiplicar las escuelas, las cátedras, las bibliotecas, los museos, los teatros, las librerías. Habría que multiplicar las casas de estudio para los niños, las salas de lectura para los hombres, todos los establecimientos, todos los refugios donde se medita, donde se instruye, donde uno se recoge, donde uno aprende alguna cosa, donde uno se hace mejor; en una palabra, habría que hacer que penetre por todos lados la luz en el espíritu del pueblo, pues son las tinieblas lo que lo pierden”.

Víctor Hugo (1848).



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## **Resumen**

El turismo es un importante motor de desarrollo económico a nivel mundial, cuya tasa de crecimiento ha alcanzado unas cifras extraordinarias. Así pues, desde hace varias décadas, es imposible entender la industria turística sin tener en cuenta el concepto de sostenibilidad. Dentro del turismo sostenible, el turismo rural y de naturaleza serían las modalidades que más adeptos ha ganado en los últimos años, siendo las áreas naturales protegidas uno de los principales destinos protagonistas.

Uno de los mayores desafíos que repercute en la gestión de las áreas protegidas es la asunción de los costes derivados de la conservación por parte de la población local. En este sentido, el turismo de naturaleza o turismo rural se posiciona como una excelente herramienta para poder sufragar los costes inherentes a la conservación medioambiental y compensar a las poblaciones locales por las pérdidas asociadas a las limitaciones legales impuestas. No obstante, este turismo puede convertirse en un arma de doble filo, ya que es necesario considerar las externalidades negativas causadas por la industria turística, las cuales pueden ser aún más importantes en este tipo de enclaves. Por ello, es necesario encontrar un equilibrio entre conservación medioambiental y desarrollo socioeconómico para lograr la sostenibilidad de estas zonas rurales.

Situados en este escenario, esta tesis doctoral, formada por tres artículos científicos, tiene como objetivo principal examinar el uso público y desarrollo rural experimentado en los municipios afectados por la declaración de entornos naturales protegidos en el territorio español entre los años 2009 y 2019.

**Palabras clave:** área natural protegida, gestión de negocios turísticos, sostenibilidad.





## **Abstract**

Tourism is an important driver of economic development worldwide, with an extraordinary growth rate. Thus, for several decades, it has been impossible to understand the tourism industry without considering the concept of sustainability. Within sustainable tourism, rural and nature tourism is one of the most popular forms of tourism in recent years, with protected natural areas being one of the main destinations.

One of the greatest challenges affecting the management of protected areas is the assumption of the costs derived from conservation by the local population. In this sense, nature tourism or rural tourism is an excellent tool for defraying the costs inherent to environmental conservation and compensating local populations for the losses associated with the legal limitations imposed. However, this tourism can become a double-edged sword, as it is necessary to consider the negative externalities caused by the tourism industry, which can be even more important in this type of enclaves. It is, therefore, necessary to find a balance between environmental conservation and socio-economic development to achieve the sustainability of these rural areas.

Against this backdrop, the main objective of this doctoral thesis, consisting of three scientific articles, is to examine the public use and rural development experienced in the municipalities affected by the declaration of national parks in Spain between 2009 and 2019.

**Keywords:** protected natural area, tourism business management, sustainability.



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# **INTRODUCCIÓN**



## **Introducción**

### **1. PRESENTACIÓN TEMÁTICA DE LAS PUBLICACIONES**

La presente tesis doctoral se compone de tres artículos científicos que, previamente, han sido publicados en revistas de impacto. La temática sobre la que versan los mismos se encuentra relacionada con el uso público de las áreas protegidas en España; en especial, se enfocan en el desarrollo sostenible experimentado por la icónica figura de parque nacional. No obstante, también se analiza el desarrollo rural como consecuencia de otro tipo de espacio natural asimilable a esta categoría de protección, pero con notables diferencias desde el punto de vista legislativo, como son los geoparques.

Cada artículo conforma un capítulo distinto de esta tesis doctoral. A continuación, se presenta brevemente cada uno de estos:

- En el primer capítulo se analiza la percepción local acerca de la sostenibilidad de los parques nacionales españoles tras su declaración, dadas las limitaciones al uso público que esta figura de protección lleva implícita, siendo la categoría de protección más restrictiva del ordenamiento jurídico español.
- El segundo capítulo integra la dimensión del desarrollo turístico empresarial en los municipios situados en la zona de influencia socioeconómica de los parques nacionales peninsulares y su relación con otras perspectivas referentes al desarrollo rural de estas poblaciones.
- Y, el tercer capítulo muestra un estudio sobre la percepción del desarrollo rural en un tipo de espacio natural diferente al parque nacional, pero con bastantes similitudes en cuanto al tipo de turista se refiere, los Geoparques Mundiales de la Unesco, los cuales gozan de una mayor flexibilidad en el desarrollo y gestión turístico.

Estos trabajos ofrecen una visión completa e integradora de la evolución del uso público, el desarrollo turístico y el desarrollo sostenible percibido por la población local y los gestores políticos municipales de las localidades situadas en la zona de influencia de los parques nacionales españoles en el horizonte temporal correspondiente a 2009-2019. Asimismo, el estudio referente al desarrollo rural percibido en un entorno natural diferente, los geoparques, permite observar las diferencias percibidas en función de las limitaciones inherentes a la declaración de área protegida.

A continuación, se muestran las referencias bibliográficas de los tres artículos mencionados:

▪ **Capítulo 1**

Pérez-Calderón, E., Prieto-Ballester, J. M., Miguel-Barrado, V. y Milanés-Montero, P. (2020). Perception of sustainability of spanish national parks: Public use, tourism and rural development. *Sustainability*, 12(4), 1333. <https://doi.org/10.3390/su12041333>

▪ **Capítulo 2**

Pérez-Calderón, E., Miguel-Barrado, V. y Sánchez-Cubo, F. (2022). Tourism Business in Spanish National Parks: A Multidimensional Perspective of Sustainable Tourism. *Land*, 11(2), 190. <https://doi.org/10.3390/land11020190>

▪ **Capítulo 3**

Pérez-Calderón, E., Prieto-Ballester, J. M. y Miguel-Barrado, V. (2022). Perceived Rural Development in UNESCO Global Geoparks in Spain. *Land*, 11(7), 1086. <https://doi.org/10.3390/land11071086>

## **2. JUSTIFICACIÓN Y OPORTUNIDAD**

### ***2.1. La importancia del turismo en la actualidad. El turismo de naturaleza***

El turismo es una de las actividades económicas más importante a nivel mundial. Este sector ha experimentado un crecimiento continuo durante seis décadas y en el año 2019 (último año de normalidad antes de la pandemia por COVID-19) representó el 10,4% del producto interior bruto global (OECD, 2020; WTTC, 2021). Así pues, se trata de un importante motor de desarrollo económico. Entre cuyos beneficios destacan su capacidad para alcanzar el desarrollo social, la creación de empleo, el impulso de las economías locales o la mejora de la calidad de vida de la sociedad (UNWTO, 2021; WTTC, 2021).

En este panorama, es notorio el papel que ostenta España, siendo el segundo destino a nivel mundial, por detrás de Francia, en cuanto al número de visitas internacionales se refiere, quedando muy cerca de los 84 millones en el año 2019 (UNWTO, 2021).

Entre los diferentes segmentos turísticos a nivel internacional, uno de los que más destaca es el turismo de naturaleza, en tanto que se posiciona como uno de los sectores con mayor crecimiento en la industria, representando en 2018 un 15% del total de la misma y el 3,9% del PIB turístico mundial (Cordente-Rodríguez et al., 2021; OECD, 2009; WTTC, 2019). Esta modalidad de turismo se ha visto incrementada considerablemente en los últimos años y las principales causas de ello se centran en el trascendental cambio sociocultural de la sociedad, el aumento de la preocupación por el medio ambiente o el cambio en las motivaciones de los turistas, entre otros aspectos (Aparicio, 2012; Carvache-Franco et al., 2019; Eagles et al., 2001; Gómez-Limón y García, 2014). Además, es necesario señalar que, aunque el turismo ha sido uno de los sectores más perjudicados por la pandemia por COVID-19, las modalidades asociadas al turismo rural o de naturaleza han sido de las menos afectadas (Moreno-Luna et al., 2021; Uğur y Akbıyık, 2020).

Asimismo, este turismo rural y de naturaleza supone un excelente mecanismo para estimular la economía de las zonas rurales, pues promueve el desarrollo socioeconómico,

dota de servicios e infraestructuras y mejora la calidad de vida de la población local (Hall, 2004; Lane, 1994; Nunkoo y Gursoy, 2012; Nyaupane y Poudel, 2011; Winter et al., 2020). En este sentido, este tipo de turismo cobra especial relevancia en un país como es España, cuya superficie rural alcanza el 85% de su territorio y que además se enfrenta al desafío del reto demográfico con una de las despoblaciones rurales más preocupantes del sur de Europa (ESPON, 2018; MITECO, 2017).

Además de lo anterior, gran parte del territorio español, se encuentra amparado por alguna figura de protección medioambiental; concretamente, un total del 28,11% de su superficie terrestre y 12,76% de su superficie marina (UNEP-WCMC, 2022b). Así pues, el turismo de naturaleza se convierte en una gran oportunidad para España considerando que se trata de uno de los países de Europa con mayor riqueza de biodiversidad (CBD, 2021; IUCN, 2022).

## ***2.2. Las áreas protegidas en el paradigma actual: los parques nacionales españoles***

A nivel mundial, según los últimos datos proporcionados por la Base de Datos Mundial sobre Áreas Protegidas, existen más de 253.000 y 17.000 áreas protegidas terrestres y marinas, respectivamente. Para entender la tendencia y el imponente auge en la declaración de estos espacios, el porcentaje de superficie terrestre mundial protegida pasó de un 4% en 1985 a alcanzar una cifra cercana al 17% en 2022 (Bradshaw et al., 2015; UNEP-WCMC, 2022a).

En este escenario planteado, España posee un destacado papel en el proteccionismo medioambiental, cuyo origen se retrotrae al año 1916, momento en el que tiene lugar la promulgación de la que se considera la primera ley de parques nacionales del mundo (Castroviejo-Bolívar, 2004; Muñoz y Benayas, 2012). En la actualidad, para plasmar la realidad jurídica de la red de áreas protegidas constituida en el estado español hay que tomar como referencia la legislación estatal, en concreto la Ley 42/2007, de 13 de diciembre, del Patrimonio Natural y de la Biodiversidad; la legislación proveniente de las Comunidades Autónomas y los instrumentos legales internacionales (EUROPARC-España, 2021).

De conformidad con lo dispuesto en la ley anterior, se pueden diferenciar tres grupos de áreas protegidas en España: en primer lugar, Espacios Naturales Protegidos; en segundo lugar, espacios protegidos Red Natura 2000; y, en tercer lugar, áreas protegidas por instrumentos internacionales. A su vez, estos tres grupos se componen de diferentes figuras legales, tal y como se puede observar en la Tabla 1.

**Tabla I.** Categorías legales de protección de entornos naturales en España

	<b>Figura</b>	<b>Número</b>	<b>Superficie (Ha)</b>
<b>Espacios naturales protegidos</b>	Parque nacional <sup>1</sup>	16	488.678
	Parque natural	152	4.075.116
	Reserva natural	291	169.165
	Monumento natural	359	89.505
	Paisaje protegido	61	160.762
	Área marina protegida	2	4.896.316
<b>Red Natura 2000</b>	LIC	1.468	17.338.757
	ZEPA	658	15.449.468
<b>Áreas protegidas por instrumentos internacionales</b>	Reservas de la biosfera	52	7.214.754
	Humedales RAMSAR	75	308.246
	ZEPIM	9	148.484
	OSPAR	13	2.034.219
	Geoparques	15	2.693.371
	Sitios naturales de la Lista de Patrimonio Mundial	4	76.839

*Fuente: Elaboración propia a partir de EUROPARC-España (2021)*

La diferenciación entre estos tres bloques radica en el procedimiento y órgano de declaración. De este modo, los espacios naturales protegidos tienen su origen en la legislación estatal y autonómica y su declaración obedece a motivos de utilidad pública. Por otro lado, los espacios de la Red Natura 2000, se clasifican y designan según las normas de la Unión Europea. Por último, en cuanto al régimen de los espacios protegidos por instrumentos internacionales, este se rige por lo establecido en los convenios y acuerdos internacionales (EUROPARC-España, 2019).

Para situar la presente investigación en este panorama legislativo español, conviene remarcar que esta tesis doctoral se centra, esencialmente, en la figura de protección relativa a los parques nacionales; al mismo tiempo que también aborda, brevemente, la designación de los geoparques.

<sup>1</sup> El último parque nacional incorporado a la red es el parque nacional de Sierra de las Nieves, declarado el 1 de julio de 2021 mediante la Ley 9/2021. Se encuentra situado en la provincia de Málaga y tiene una extensión de 22.979,76 hectáreas.

En cuanto al origen de las áreas protegidas, estas se crearon inicialmente con una finalidad exclusivamente conservacionista. No obstante, con el paso del tiempo sus objetivos se han visto enormemente expandidos hacia funciones económicas y sociales (EUROPARC España, 2016; Jepson et al., 2011; Maurín, 2008). Así pues, en la actualidad, se pueden distinguir hasta cinco fines diferentes referidos a conservación y protección, ciencia e investigación, educación, recreo y desarrollo socioeconómico (Tolón y Ramírez, 2002).

En lo que respecta a la finalidad relacionada con el desarrollo socioeconómico, es importante destacar la relación existente en la literatura previa entre la declaración de espacios naturales protegidos y el desarrollo turístico (Bushell y Eagles, 2006; Ceballos-Lascuráin, 1996; Eagles et al., 2002). A nivel mundial, es elevado el número de personas que optan por visitar estos espacios atraídos por su gran valor recreativo (Bell y Stockdale, 2015; Chen et al., 2021; Reinius y Fredman, 2007), señalando algunos estudios que las áreas protegidas terrestres reciben alrededor de 8.000 millones de visitas anuales (Balmford et al., 2015). A causa de esta cifra tan elevada y la previsión de su aumento en el futuro, existe una gran preocupación sobre la sostenibilidad de las áreas protegidas (Dinica, 2018; Weaver y Lawton, 2017).

En España, la figura natural de protección por excelencia es el parque nacional (OAPN, 2008; Rodríguez-Rodríguez et al., 2019). Actualmente, en el país existen 16 parques nacionales declarados (Tabla 2) y cuentan con una ley propia que proporciona su marco jurídico, a saber la Ley 30/2014, de 3 de diciembre, de Parques Nacionales.

El asombroso atractivo turístico que suponen estos enclaves naturales se puede observar en el número de visitas recibidas, el cual superó la cifra de los 14 millones de visitantes en 2019, suponiendo un incremento del 47% en los últimos diez años (OAPN, 2020).



**Tabla II.** Datos principales de los parques nacionales en España. Año 2020

Nombre	Año de declaración	Comunidad Autónoma	Superficie (Ha)	Visitas
<b>Picos de Europa</b>	1995	Asturias, Cantabria y Castilla y León	67.455	1.383.338
<b>Ordesa y Monte Perdido</b>	1982	Aragón	15.696	422.570
<b>Teide</b>	1954	Islas Canarias	18.990	2.167.877
<b>Caldera de Taburiente</b>	1954	Islas Canarias	4.690	182.567
<b>Aigüestortes</b>	1955	Cataluña	14.119	470.744
<b>Doñana</b>	1969	Andalucía	54.252	144.354
<b>Tablas de Daimiel</b>	1973	Castilla-La Mancha	3.030	77.232
<b>Timanfaya</b>	1974	Islas Canarias	5.107	532.515
<b>Garajonay</b>	1981	Islas Canarias	3.984	473.191
<b>Archipiélago de Cabrera</b>	1991	Islas Baleares	90.800	25.751
<b>Cabañeros</b>	1995	Castilla-La Mancha	40.856	70.584
<b>Sierra Nevada</b>	1999	Andalucía	85.833	418.734
<b>Islas Atlánticas</b>	2002	Galicia	8.480	318.570
<b>Monfragüe</b>	2007	Extremadura	18.396	340.161
<b>Sierra de Guadarrama</b>	2013	Madrid y Castilla y León	33.960	2.299.464
<b>Sierra de las Nieves</b>	2021	Andalucía	22.980	-

*Fuente: Elaboración propia a partir de EUROPARC-España (2021)*

### ***2.3. Limitaciones asociadas al proteccionismo: la oportunidad del turismo sostenible***

De este modo, y desde una perspectiva más sostenible, el turismo se presenta como una herramienta del desarrollo en los espacios naturales protegidos, en especial en los parques nacionales (Reihanian et al., 2012). En estas zonas, el turismo se puede considerar un medio fundamental para alcanzar el crecimiento socioeconómico, promover el empleo, mejorar la calidad de vida de su población local y propiciar la conservación del patrimonio natural y educación ambiental (Chen et al., 2021; Curtin, 2013; EUROPARC-España, 2010; Jaafar y Maideen, 2012; Sánchez-Ollero et al., 2021). Por lo tanto, se puede establecer una relación entre la declaración de estos espacios y una mejora del desarrollo social y económico de la población local a largo plazo (Aparicio, 2012; Casas, 2008; Pulido-Fernández, 2007).

Sin embargo, los beneficios reportados por el turismo en las áreas protegidas no debe entenderse como una premisa, sino que es necesario atender con precisión a las características del destino y las concretas demandas turísticas (Montaguti y Mingotto,

2015). Además, hay que tener en cuenta que la declaración de este tipo de espacios no está libre de inconvenientes, pues este tipo de designaciones desemboca en una limitación del uso público del terreno al que afecta y restricciones a determinadas actividades socioeconómicas delimitadas en la legislación (Aparicio, 2012; Leung et al., 2018; Mulero-Mendigorry, 2015; Rodríguez-Rodríguez et al., 2019). Además, las limitaciones son aún mayores cuando nos fijamos en la figura de parque nacional, pues es la más restrictiva de todo el ordenamiento jurídico español en cuanto al desarrollo del uso público se refiere, lo cual puede suponer un importante obstáculo al desarrollo socioeconómico del territorio (Flores-Ruiz, 2009; Järv et al., 2015; Leco-Berrocal y Mateos-Rodríguez, 2021).

En este sentido, uno de los mayores desafíos de la declaración de las áreas naturales protegidas es la asunción de los costes derivados de la conservación, los cuales deben ser soportados por la población local que habita en las inmediaciones (Badola et al., 2018; Brockington et al., 2006). A priori, este tipo de limitaciones no son consideradas de forma positiva por parte de la población más cercana, pues pueden incidir directamente en intereses propios, desembocando en consecuencias como pueden ser la restricción de explotaciones agrarias u otros usos tradicionales de la tierra, la limitación en la construcción e instalación de infraestructuras, expropiaciones de la propiedad privada, empeoramiento de la calidad de vida de la población, limitaciones laborales, despoblación, entre otras (Aparicio, 2012; Benayas et al., 2006; Cobo y Aparicio, 2014; Leco-Berrocal y Mateos-Rodríguez, 2021; Mulero-Mendigorry, 2015; OAPN, 2011; Prieto-Ballester, 2017; Rodríguez-Rodríguez et al., 2019, 2021).

Centrándonos en España, los municipios situados en las inmediaciones de los parques nacionales, es decir, en su zona de influencia socioeconómica, encuentran, en cierto modo, compensadas estas limitaciones al uso público a través de un sistema de subvenciones públicas (España, 2014; Rodríguez-Rodríguez et al., 2019). Sin embargo, estas medidas por sí solas resultan insuficientes si, verdaderamente, se desea alcanzar una efectiva combinación entre desarrollo económico y conservación (Aparicio, 2012).

Por todo lo anterior, son numerosos los autores que proponen el turismo como un medio propicio para mitigar estas externalidades negativas inherentes a la protección de los recursos naturales, en tanto que, gestionado de forma adecuada, proporciona una importante fuente de ingresos locales respetando, al mismo tiempo, la conservación

medioambiental (Badola et al., 2018; Karanth y Nepal, 2012; Mammides, 2020; Naidoo et al., 2019; Turner et al., 2012).

Por tanto, nos encontramos en un panorama desafiante en el que, por un lado, la protección medioambiental puede restringir, en cierto modo, la generación de ingresos de las comunidades locales; y, por otro lado, la declaración de este tipo de espacios es generadora de una tipología de turismo sostenible que puede ser considerada como una importante vía para lograr el desarrollo económico, el bienestar social, la potenciación de los valores de estos entornos y, por ende, la conservación medioambiental (Leung et al., 2019; Saviano et al., 2018; Yergeau, 2020).

#### ***2.4. Necesidad de un modelo de gestión turístico sostenible***

No obstante, a pesar de lo citado anteriormente, es importante destacar que el poder generador de riqueza del turismo en las áreas protegidas dependerá, en gran medida, del modelo de gestión turístico que se adopte (Goodwin, 2002).

Asistimos, pues, a un escenario en el que la sostenibilidad media entre la industria turística y conservación medioambiental, lo cual nos lleva a una única solución, que es una adecuada gestión de los recursos naturales (McKercher, 1993). Todo ello teniendo en cuenta que se trata, pues, de un tema complejo, ya que es necesario tener en cuenta que el despliegue de la actividad turística en los espacios naturales protegidos desemboca en un terreno en el que se confrontan numerosos y diferentes intereses: políticos, legislativos, económicos, ambientales y sociales (Buckley, 2018).

Dada la importancia del uso público, y en especial, del turismo para el desarrollo socioeconómico de las zonas naturales protegidas, son numerosos los estudios que determinan que es necesario establecer un modelo de gestión que coordine el ámbito económico y la conservación medioambiental, a pesar de la gran complejidad que ello supone (Adams et al., 2004; Bushell y Bricker, 2017; DeFries et al., 2007; Frost et al., 2014; Jepson et al., 2017; Nepal, 2000; Pulido-Fernández, 2007).

Una reciente revisión sistemática de la literatura que analizó los principales estudios publicados entre 2008 y 2018 sobre el turismo sostenible y las áreas protegidas pone de relevancia cuáles han sido las principales medidas que diversos investigadores han propuesto para dar una respuesta al interrogante de cómo debe afrontarse la gestión

turística de estas áreas naturales (Mandić, 2019). Entre las diferentes medidas propuestas, destacan aspectos como son la gobernanza, la capacidad de carga o el financiamiento de las mismas (Benayas y Muñoz, 2007; Gómez-Limón y García, 2014; Mandić, 2019; Prieto-Ballester, 2017; Pulido-Fernández, 2008, 2009).

A mayor abundamiento, sin una planificación y una gestión adecuada, el uso público y el turismo pueden impactar negativamente sobre la preservación de la naturaleza, convirtiéndose así en una amenaza medioambiental (Bell y Stockdale, 2015; EUROPARC-España, 2010; Valentine, 1992), sin contar con los costes ecológicos, sociales y culturales que a largo plazo puede suponer (EUROPARC-España, 2010). Además, es necesario considerar que, dadas las características intrínsecas de este tipo de espacios naturales, la trascendencia de los impactos negativos derivados del turismo es mayor que en cualquier otro destino debido a la fragilidad de sus recursos (EUROPARC-España, 2010; Zhang et al., 2019). Por otro lado, y desde un punto de vista turístico, estos impactos negativos pueden afectar a la experiencia de los viajeros y, por ende, en la imagen y viabilidad de las empresas locales relacionadas con el turismo (EUROPARC-España, 2010). Es en este escenario en el que surge la necesidad de atender a un concepto de gran relevancia en la gestión turística de las áreas protegidas, que no es otro que la capacidad de carga, el cual hace referencia a la determinación del máximo aprovechamiento del uso recreativo sin menoscabar la conservación ambiental (Gómez-Limón y García, 2014; Ly y Nguyen, 2017; Paskova et al., 2021; Pulido-Fernández, 2005; Sumner, 1942).

En definitiva, se trata de alcanzar un desarrollo turístico en clave sostenible, de tal modo que las dimensiones económica, social y ambiental se encuentren equilibradas y logren sinergias entre ellas (Butler, 1999; Swarbrooke, 1999). Así pues, el turismo debe tener en cuenta las necesidades de todas las partes interesadas, pues solamente de esta manera el turismo puede situarse en el camino de la sostenibilidad (McKercher, 1993).

### ***2.5. El papel de la población local en la gestión turística sostenible***

Por otra parte, es importante destacar el peso que tienen todas las partes interesadas en la planificación, gestión y toma de decisiones en cuanto al desarrollo turístico (Chen et al., 2021; Freeman, 2010; Gunn y Var, 2020; Jamal y Getz, 1995;

Sautter y Leisen, 1999). Entre estos agentes implicados destacan especialmente los turistas, los residentes, el sector público y la industria turística (Nicholas et al., 2009). Además, tener en consideración a los agentes implicados es un tema de especial relevancia en aquellos destinos naturales protegidos (Chen et al., 2021). En este sentido, en la gestión de las áreas protegidas destaca sobremanera el concepto de gobernanza, entendida esta como una forma de colaboración entre todas las partes interesadas, constituyendo un factor fundamental para entender el bienestar de la población local y un reparto equitativo de los beneficios derivados del turismo (Eagles et al., 2013; Heslinga et al., 2019; Prieto-Ballester, 2017).

Del elenco de partes interesadas en el desarrollo turístico sostenible, existen estudios que determinan que los residentes configuran unas de las más importantes (Eusébio et al., 2018; Gursoy et al., 2019; Lee y Jan, 2019). En este sentido, conviene subrayar la relevancia de la percepción local y el apoyo que los residentes brindan al turismo, ya que suponen un factor esencial en la sostenibilidad turística (Almeida-García et al., 2016; Lee y Jan, 2019).

Particularmente, la percepción local supone un aspecto fundamental en el desarrollo sostenible y la gestión de los espacios naturales protegidos y sigue siendo todavía un tema poco analizado en la literatura previa (Andrade y Rhodes, 2012; Badola et al., 2018; Lin y Lee, 2022; Oldekop et al., 2016; Rodríguez-Rodríguez et al., 2019; Su et al., 2018). En particular, centrándonos en destinos protegidos, como son los parques nacionales, es crucial en tanto que son los residentes los que más sufren las limitaciones en las que puede desembocar la declaración de una figura de protección como tal (Peng et al., 2016). En este sentido, la actitud de la población local hacia el desarrollo del turismo se ve condicionada, en gran parte por las externalidades económicas derivadas de esta actividad (Bello et al., 2016; Liasidou et al., 2021; Mearns, 2012; Rasoolimanesh et al., 2015).

En línea con lo anterior, cabe destacar que existen recientes revisiones de la literatura que en las que se han examinado numerosos estudios relevantes concluyendo que las actitudes y percepciones positivas hacia las áreas protegidas en todo el mundo prevalecen sobre las negativas (Allendorf, 2020, 2022). Ello pone de manifiesto que las áreas naturales protegidas a nivel mundial, y de forma general, se asocian a externalidades positivas desde el punto de vista económico y el bienestar de las comunidades locales

(Gursoy et al., 2002; Gursoy y Rutherford, 2004; Mammides, 2020; Naidoo et al., 2019; Nunkoo y Ramkissoon, 2011).

Finalmente, esta tesis doctoral ofrece, en primer lugar, un gran aporte teórico sobre el turismo de naturaleza y desarrollo sostenible en las áreas protegidas, en especial, en los parques nacionales españoles, suponiendo una gran contribución a la literatura. Y, en segundo lugar, desde una perspectiva práctica y dados los resultados de los distintos análisis llevados a cabo, puede ser de gran utilidad para los gestores de los parques nacionales, así como a los empresarios y resto de agentes implicados o afectados por la gestión del uso público de este tipo de entorno protegido. En definitiva, esta investigación puede contribuir a promover el turismo sostenible, mejorar el modelo de explotación turística, y así asegurar la preservación natural además del desarrollo económico y mejora de la calidad de vida de los residentes de las zonas de influencia de los parques nacionales en España.

### **3. OBJETIVO GENERAL Y OBJETIVOS ESPECÍFICOS**

En relación con el objetivo general de la presente tesis doctoral, el mismo se centra en analizar el uso público y desarrollo sostenible experimentado en los municipios afectados por la declaración de parque nacional en el territorio español entre los años 2009 y 2019.

Este objetivo principal se puede desagregar en tres subobjetivos, los cuales coinciden con los objetivos marcados en cada uno de los artículos que componen esta investigación. Estos tres objetivos específicos son los siguientes:

1. Analizar el desarrollo sostenible percibido por los gestores políticos de las corporaciones municipales de las localidades situadas en las zonas de influencia socioeconómica de los parques nacionales españoles, como figura de protección más restrictiva en cuanto al uso público del ordenamiento jurídico.

2. Examinar los factores que inciden en el desarrollo turístico empresarial de los municipios situados en las zonas de influencia socioeconómica de los parques nacionales peninsulares, considerando las dimensiones empresariales, de infraestructuras de accesibilidad del transporte, características socioeconómicas y de percepción local.

3. Conocer cuál es el desarrollo rural sostenible percibido por los máximos gestores políticos de los municipios afectados por la declaración de geoparque en España, como destino natural turístico con un régimen jurídico más flexible que los parques nacionales, considerando las dimensiones de desarrollo económico, social y las infraestructuras del entorno.

#### 4. PLANTEAMIENTO METODOLÓGICO

Con respecto al planteamiento metodológico que ha sustentado la realización de esta tesis doctoral, en primer lugar, se llevó a cabo un minucioso y profundo estudio bibliográfico sobre los artículos científicos que tratan la temática de estudio a través de diferentes motores de búsqueda como son Web of Science, Scopus o ScienceDirect.

Además de la literatura científica, se tuvieron en cuenta numerosos informes técnicos elaborados por distintas instituciones nacionales e internacionales, como son el Ministerio para la Transición Ecológica y el Reto Demográfico, la Federación EUROPARC, o la Unión Internacional para la Conservación de la Naturaleza, entre otras. Y, además de todo lo anterior, también se analizó la legislación estatal sobre la protección de áreas naturales en España.

En segundo lugar, y en relación con el análisis empírico, la metodología empleada difiere en función de cada artículo de estudio. Así pues, se muestra un resumen general en la Tabla 3.

**Tabla III.** Resumen del análisis metodológico utilizado en los distintos artículos

Capítulo	Revista	Recogida de datos	Análisis de datos	Muestra
Capítulo 1	Sustainability	Cuestionario	Modelo de ecuaciones estructurales	75 municipios
Capítulo 2	Land	Cuestionario y bases de datos	Análisis clúster y modelo logit	103 municipios
Capítulo 3	Land	Cuestionario	Modelo de ecuaciones estructurales y análisis de Importancia-Rendimiento (IPMA)	116 municipios

*Fuente: Elaboración propia.*





# **CAPÍTULO 1**

**Percepción de la sostenibilidad de los parques nacionales  
españoles: Uso público, turismo y desarrollo rural**

**Perception of Sustainability of Spanish National Parks: Public Use,  
Tourism and Rural Development**



Article

# Perception of Sustainability of Spanish National Parks: Public Use, Tourism and Rural Development

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**Abstract:** In the last decade, tourism activity associated with natural areas has stood out as a driver for economic development. Thus, it is a key factor for the economic and social sustainability of the community near a protected area. This paper analyses, considering the tourist exploitation and the public use of the National Park in the last decade, the perception about the sustainability of its geographical area closest. A questionnaire was used and sent to the authorities of the villages closest to each of the 15 National Parks. The structural equation model was used for the design and analysis of the model. The results confirmed significant relationships between the perception of economic development and quality of life, but not with social development. A positive relationship between quality of life and social development is also demonstrated. The three dimensions analysed, economic, social and quality of life, are influencing the perception of sustainability of the geographical area closest to the protected natural area. The legal limitations to the public use of these natural protected areas have been considered in the assessments made by the respondents. In conclusion, National Park managers, local entrepreneurs and institutional authorities (local, regional and national) are encouraged to better coordinate the resources of the protected natural area. The dynamization of tourist activities should be encouraged while respecting the biological value of the park, as has been done so far.

**Keywords:** rural development; National Parks; nature tourism; public use

## 1. Introduction

The tourism business is a very important factor in economic and social development. In 2018 it contributed to 10.4% of the world's GDP, which was 3.9% higher than the previous year [1]. Spain is a tourist power and is positioned as the second-largest tourist destination in the world in terms of visitor reception [2].

Tourist activity can be particularly interesting in rural areas due to the deterioration of their main sources of wealth generation, agriculture and livestock [3,4]. The economic marginalisation of these rural areas and the ageing of their residents are causing their impoverishment and depopulation [5]. In particular, nature tourism is strongly associated with these rural areas. This type of tourism has shown constant growth in recent years, both in the world and in Spain. Thus, nature tourism can contribute to the development of rural areas that have a natural environment that is institutionally recognised for its high biological value [6].

In Spain, the figure with the greatest biological recognition and legal protection are the National Parks. This country has 15 National Parks that represent 0.76% of its territory. Likewise, this figure

is the best known by society among all the protection categories and has a great tourist attraction, registering millions of visits annually [7,8]. Furthermore, Spanish National Parks represent exceptional environments with their own culture and biological personality, due to the authenticity of their resources, which is one of the country's distinguishing characteristics [9].

In accordance with the above, protected areas are considered an appropriate means of combining traditional activities with new business niches associated with rural and nature tourism, with the aim of promoting sustainable development in the area of influence of the protected natural area [10–13]. In this sense, public use of National Parks cannot be limited only to activities such as contemplation or preservation [14]. Consequently, these wonderful natural spaces must extend their potential to the social and economic sphere, and it is advisable to design sustainable development strategies [15–19].

Economic development in the areas of influence of protected natural environments should not be understood as a form of over-exploitation [19]. Achieving the self-sufficiency and sustainability of the areas bordering these natural spaces would achieve the objective set by the legal norm, since these areas of influence are usually economically disadvantaged rural areas due, among other factors, to the decline of agriculture and the limitations on the use of natural resources as a result of the declaration of a protected space [20,21].

In the previous literature, you can find quite a few studies on rural development and sustainable tourism from an economic and social perspective using macroeconomic indicators. This paper contributes to the previous literature since there are very few studies referring to the perception of sustainability of this type of tourist destinations. In addition, the controversy that justifies this study would be the one that occurs when a National Park is declared and regulated by a law where an important set of limitations to its public use are related. At the same time, the main objectives include the enjoyment of the protected area and the development of its area of socioeconomic influence. These aims will be achieved through the appropriate exploitation of the attraction of the tourist destination, which is a privileged natural environment.

Thus, analysing the limited public use, recognized by law, of the National Parks and the tourist exploitation carried out in the last ten years, the study aims to answer the following question: do the residents near the National Parks perceive that their community is sustainable? According to the above, the main objective of the paper is the analysis of the perception of the economic and social development and the quality of life of the residents in the villages closest to the National Park. In addition, the relationships that are occurring between these latent factors will be measured, and also between these factors and the villagers' perception of the sustainability of their environment.

This paper is structured as follows. In Section 2, the legal framework affecting the public use of Spanish National Parks is analysed, as well as its evolution. In Section 3, the conceptual framework referring to the importance of nature tourism in the socio-economic development of a given geographical demarcation is analysed; here, too, the study hypotheses are defined. In Section 4, the sample and methodology used are detailed. In Section 5, the results of the study are drawn up. Finally, the conclusions and limitations of the paper are shown.

## 2. Literature Review

### 2.1. Protected Natural Areas. Public Use of Spanish National Parks

A protected natural area is a clearly defined geographical area recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature and associated cultural values [22].

The beginning of the international protectionist trend dates back to 1872 when Yellowstone National Park was declared in the United States [23,24]. The objective of this first declaration was based on the preservation of natural space for the enjoyment of people, due to the devastating effect of human actions on natural resources [25–27]. Focusing on the European landscape, Russia, Switzerland and Spain were the first to regulate the protection of National Parks [28,29].

The concepts of National Park and public use are closely linked and are in constant evolution, as can be seen in Table 1.

**Table 1.** Evolution of the concept of public use.

Period	The Function of Public Use	Role of the Administration
Late 19th century–1930s	Recreation and contemplative enjoyment	Facilitating access
1930s–1960s (USA)	Environmental education and interpretation	Promote activities
The 1970s	Recreational conditioning	Build reception facilities (picnic areas, barbecues, etc.)
The 1980s	First actions in environmental education and interpretation in protected natural areas	Build equipment for environmental education and interpretation. Public use as a tool for the management of protected natural areas
1990s–2000	Social function Socio-economic vision Construction of visitor centres Extension to tourism and leisure	Planning in an orderly fashion First studies on visitors First evaluations Opportunity to the private sector for equipment management
2001–2014	A Driver of socio-economic development Multiple vision of public use (culture, training, health...) Transcendence of securities Involvement of society	Planning with network vision Public use at the network level Cascade planning (governance) Public use as a communication strategy (means of preservation) Actions in favour of the quality of public use (Quality Q and CETS)

Source: Authors [30].

Table 1 shows that the mere conservationist approach has been evolving towards a model in which the relationship of the human being with nature is promoted through the harmonization of the objectives of preservation and socioeconomic development, turning the National Parks into authentic drivers of sustainable development [26,31].

In particular, in the case of Spain, the protective regime of the National Parks has undergone a significant evolution until today [28]. At the beginning, the public use of the National Parks was only related to environmental interpretation and education [20], while, at present, public use is understood as the set of activities, services and infrastructures whose aim is to bring visitors to protected natural areas closer to their natural and cultural values, from an orderly management that guarantees the conservation of these resources and the enhancement of values such as environmental education and sustainable development [32,33].

After a review of the Spanish regulations that allow the recognition of a National Park, from the first law approved in 1916 to the last one in force since 2014, we can see how two objectives are repeated, such as the biological preservation of the protected area and paying attention to the socio-economic development of the park's area of influence. Currently, the Autonomous Communities are competent in regulatory matters and the management of their own protected areas [34]. The basic regime for public use of the National Parks is the responsibility of the State and is regulated by Law 30/2014, currently in force.

## 2.2. Nature Tourism: Effects on Sustainable Rural Development

As previously argued, the tourism sector is one of the most prominent in the global economy, due to its capacity to generate income, employment and taxes [35,36]. This wealth-generating power can also be seen in the form of nature tourism, as it is an activity that is fully compatible with environmental preservation, allowing the promotion of traditional values and the improvement of the quality of life of the local residents [37]. All of the above can have a positive effect on the attitude of the residents of the tourist destination's area of influence, which in turn has an impact on the sustainability

of the destination [38]. In this sense, the perceptions of local residents are shown to be a key factor in the development of sustainable tourism [39–42].

In the last decade, nature tourism has achieved great importance in international tourism [43]. Nowadays, there has been an increase in the number of tourists who are looking for tranquillity, a link with nature, the practice of sports activities or recreational value in the open air [26,30,44–46].

Tourism in National Parks can be of great socio-economic value to them and their respective areas of influence [21,47]. Among the benefits generated by nature tourism are: increased income; greater job creation; improved financing of the protected environment; or a higher level of environmental education and, consequently, a greater appreciation of the natural and cultural heritage by human beings [44,48,49].

On the contrary, nature tourism can also generate important negative impacts, such as the undermining of environmental conservation, seasonal unemployment, loss of tranquillity, increased pollution, the alteration of local customs, or the increase in prices of local products and services [26,44,50]. In addition, the declaration of National Parks carries with it a significant limitation on the use of the occupied land demarcation and traditional activities rooted in the area that can be detrimental to local development [21,50]. In particular, current Spanish legislation limits certain activities such as hunting, fishing, certain extractions, building, among others [51].

The National Parks in Spain have become important tourist destinations. Thus, the number of visits has grown considerably since 1991, exceeding 15.44 million in 2017, as shown in Figure 1 [52]. Nature tourism, through an adequate management model, constitutes a valuable tool through which multiple benefits can be obtained [13,19,32,53,54]. This approach represents one of the great challenges of the current panorama, that is, the search for a balance between public use for recreational purposes, the socio-economic development of the area of influence of the National Park and the conservation of the ecosystem [27,31,55].

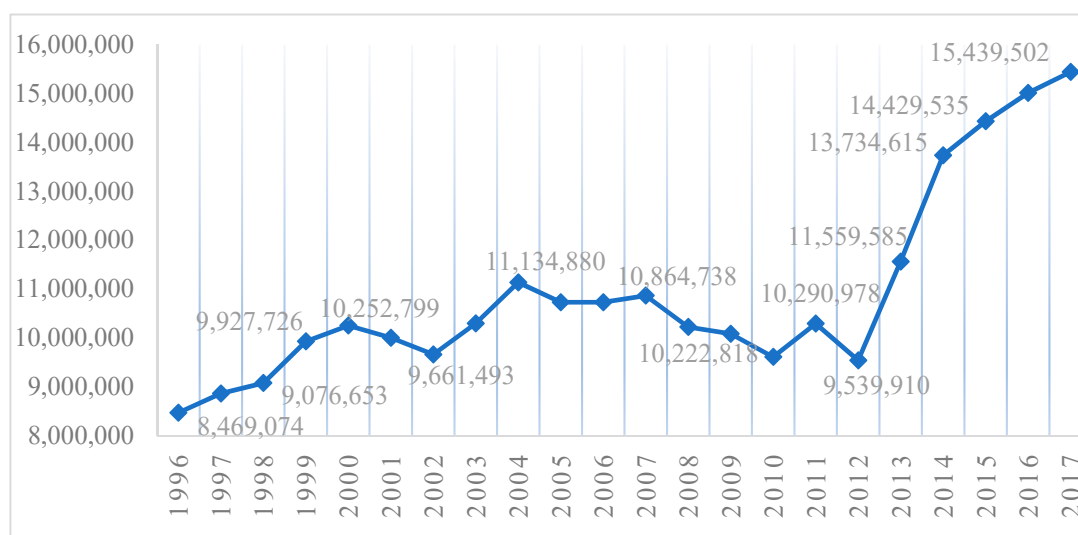


Figure 1. Evolution of visitors to National Parks in Spain [49].

In addition to the clear relationship between economic development and the sustainable development of a rural area, a number of other factors associated with the sustainability of that tourist destination can be distinguished. Thus, the perception of social development and quality of life would be factors that influence the decision to maintain residence in the village and, moreover, can have an impact on an active contribution to the maintenance of the area's resources, including those related to tourism and the biological value of the area [11,56,57]. According to the above, the preservation of natural and cultural heritage in villages can be reinforced by policies that involve greater community empowerment [41].

Considering the externalities caused by tourism in protected areas, as well as the legal limitations on public use implicit in the declaration of National Parks, it is necessary to determine the effects on the perception of environmental sustainability caused by the declaration of Spanish National Parks in their respective areas of influence. Through this study, we will be able to ratify whether the declaration of these spaces has generated a positive perception of the sustainability of the environments from a triple perspective: economic, social and quality of life. This would be an indicator of the sustainability of the area near the National Park as a tourist destination.

Several studies have demonstrated the facilitating role of economic development in social development. In particular, tourist activity can be a tool for keeping alive the customs and authenticity of a village if they are properly managed as products of interest to a tourist destination [45,58].

In this way, previous studies researching the local community's perceptions of the sustainability of tourism can be consulted in the literature, taking the theory of social exchange as a starting point. According to this theory, local residents who perceive positive effects derived from tourism will agree with the development of tourism, and vice versa. Aspects such as community attachment, participation and capacity to influence society in the management of tourism, improvement of the quality of life or low negative impact in the environmental scope result in positive perceptions towards tourism and, consequently, its success and sustainability [39–42]. In this sense, tourism activities related to the traditions and culture of the destination involve greater participation by residents and are presented as an opportunity to strengthen the identity of the local community, which also translates into a positive perception of sustainable tourism development and greater support for tourism development by local residents [39].

In the previous literature, there are many references that have demonstrated the influence of economic development on the residents' quality of life [57,59]. Thus, in the study, there is a hypothesis that reflects this relationship between the perceptions of the quality of life associated with the residents' perception of economic development.

Therefore, the perception of economic development, in addition to influencing the sustainability of the environment, maybe influencing the other latent factors. Thus, the following hypotheses can be put forward, all of which refer to the perceptions of the residents of the villages closest to a National Park:

**Hypothesis 1 (H1).** *Hypothesis 1 (H1). The perception of economic development influences the residents' perception of sustainability.*

**Hypothesis 2 (H2).** *The perception of economic development influences the residents' perception of social development.*

**Hypothesis 3 (H3).** *The perception of economic development influences the residents' perception of quality of life.*

Confirmation of each of these hypotheses would confirm the effect of the three dimensions analysed on the overall satisfaction of the declaration of a National Park and, therefore, on its sustainability.

Satisfaction with the area of residence, together with the feeling of belonging and pride in the value of the biological space, maybe the motivation that facilitates the social development of the village and also on the perception of their overall satisfaction with the environment [59,60].

**Hypothesis 4 (H4).** *The residents' perception of quality of life has influence on their perception of social development.*

**Hypothesis 5 (H5).** *The residents' perception of quality of life has influences on their perception of sustainability.*

In the case of social development, there are also studies that analyse the relationships between social perceptions or attitudes, referring to traditions and customs, with the sustainable development of a tourist destination [11,56,57]. The last hypothesis reflects this relationship:

**Hypothesis 6 (H6).** *The residents' perception of social development influences the on their perception of sustainability.*

### 3. Method

The study sample is made up of the villages located within the National Parks' zone of socio-economic influence. The selection was based on the zoning set out in the Master Plan of the National Park Network [61]. The sample totals 169 villages. The questionnaire was sent by email to the highest representatives of the town halls (mayors) and the answers were collected through a google form. In a second round to increase the number of responses, a telephone call was made to those town halls in the towns where there was no response. In the end, 75 responses were obtained, representing 44.38% of the total initial sample. Of the fifteen National Parks, three of them did not receive any answer (Cabrera, Tablas de Daimiel and Timanfaya). The most collaborative National Park was Islas Atlánticas; to a lesser extent, Teide (See Table 2). The fieldwork was carried out in November 2019.

**Table 2.** Statistics of Spanish National Parks.

National Park	Extension Has.	Residents	Number of Villages	% of Answer
Aigüestortes	14,119	13,564	10	50.00%
Cabañeros	40,856	2171	6	66.67%
Cabrera	90,800.52	414,538	2	-
Doñana	54,252	44,296	4	75.00%
Garajonay	3984	21,136	6	66.67%
Guadarrama	33,960	146,603	34	52.94%
Islas Atlánticas	8480	370,376	4	100.00%
Monfragüe	18,396	12,520	14	50.00%
Ordesa	15,696.20	1843	6	66.67%
Picos de Europa	67,127.59	14,492	11	45.45%
Sierra Nevada	85,883	69,014	44	29.55%
Tablas de Daimiel	3030	30,912	3	-
Taburiente	4690	45,094	9	55.56%
Teide	18,990.00	275,416	14	21.43%
Timanfaya	5107.50	22,408	2	-
Total	465,371.81	1,484,383	169	-

The indicators of the socio-economic development of the villages have been those detailed below (see Table 3). Some of these variables were already used in studies such as those by Mosammam et al. [62], Woo et al. [63] and Ristić et al. [13].

IBM SPSS Statistics Version 21.0 was used to perform a descriptive analysis of the data. In addition, this software was used to check the normality of the data.

The proposed model was analysed by modelling structural equations using Partial Least Squares (PLS). This is one of the most used methodologies when the cause-effect relationships need to be analysed [7,64,65] since it informs us of the sign and intensity of these relationships. A PLS path model consists in two components. Firstly, there is a structural model (the inner model) which illustrates the specified constructs and focuses on the relationships (paths) between them. Secondly, the measurement models (the outer models) show the relationships between the factors (constructs) and the indicators. While structural and measurement models are present in all types of SEMs with latent constructs, the weighting scheme represents the third specific component of the PLS approach and is used for estimating the inner weights linking latent constructs [66].



**Table 3.** Questionnaire used to collect the data <sup>1</sup>.

<b>Perception of Economic Development (ED)</b>
ED1. The level of wealth of the village, in general, has increased since the declaration of the N. Park
ED2. The village has a greater number of services related to tourism (directly or indirectly)
ED3. The subsidies received have led to an improvement in the environment in terms of signalling
ED4. You think the number of tourists in your area has increased
ED5. The municipality has increased its recreational use and has more tourist activities
ED6. Conflicts exist between tourism and the exploitation of activities related to agriculture and livestock, mineral extraction... (primary sector)
<b>Perception of Social Development (SD)</b>
SD1. The number of residents in the village has been maintained
SD2. Local culture and traditions have been preserved
SD3. The culture and traditions of your village are exploited as a tourist attraction
SD4. Conflicts have arisen between tourism and residents (noise, waste...)
<b>Perception of Quality of Life (QL)</b>
QL1. The subsidies received have led to an improvement in the area of residence in terms of infrastructure for travel to the area
QL2. An improvement in communication technologies has been noted, with greater mobile phone coverage and greater data transmission capacity
QL3. Residents would not prefer to live in another community
QL4. Since the declaration of the National Park, efficiency in resource consumption has been enhanced. For example, promoting the use of renewable energy systems to save water consumption
QL5. Residents are more environmentally friendly
QL6. You have improved the quality of life of the residents of your village
<b>Perception of Global Satisfaction (SG)</b>
GS1. Residents are more aware of the opportunity for the town to be in the National Park's zone of influence
GS2. The expectations generated by economic and social opportunities due to the proximity to a National Park have been fulfilled
GS3. The park has meant that the residents of this town are proud to live in this community and not in another
GS4. The park has meant that local customs and traditions are still alive
GS5. Rate your overall satisfaction with the declaration of National Park, by the economic impact it has had on your village

<sup>1</sup> The following instructions were given in the questionnaire heading: Please answer briefly or rate on a scale of 1 to 7 your perception of the impact of tourism exploitation and public use of the National Park near your village over the past 10 years.

#### 4. Results

In a first descriptive analysis (see Table 4) we can see how the perception of sustainable development, depending on the effect of the declaration of the National Park near that village, obtains an average rating (3.60 out of 7). A medium-high perception of tourist activity and visitors is recognised (3.84 and 4.56). An average score is also obtained for the perception of legal limitations on public use associated with the traditional activity of these villages (3.92), in line with the low score given to the question about the increase in wealth (3.23). With respect to the social construct, the item referring to the maintenance of traditions and customs was the most valued (4.21). In the quality of life (QL), an average score was reached by declaring no preference for living elsewhere (4.27); furthermore, the

deficient scores on ease of travel, access to ICTs or actions to respect the environment were highlighted (QL1, QL2, and QL4, respectively).

**Table 4.** Evaluation of the measurement model (starting elements).

Latent Variables and Their Indicators	Mean	S. Desv.	Loading	Composite Reliability	AVE
Perception of Economic Development (ED)	-	-	-	0.8540	0.5391
ED1	3.23	1.5902	0.8460	-	-
ED2	3.84	1.7323	0.8467	-	-
ED3	3.89	1.5987	0.5274	-	-
ED4	4.56	1.7876	0.8611	-	-
ED5	3.77	1.6404	0.8825	-	-
ED6	3.92	1.9225	0.0575	-	-
Perception of Social Development (SD)	-	-	-	0.7924	0.5036
SD1	3.75	1.8678	0.8804	-	-
SD2	4.81	1.6165	0.7044	-	-
SD3	4.27	1.7578	0.7587	-	-
SD4	3.16	1.6687	0.4092	-	-
Perception of Quality of Life (QL)	-	-	-	0.8409	0.5084
QL1	2.94	1.6406	0.6956	-	-
QL2	2.63	1.4024	0.8007	-	-
QL3	4.27	2.0110	0.0501	-	-
QL4	2.97	1.559	0.7969	-	-
QL5	4.05	1.692	0.7875	-	-
QL6	3.17	1.6795	0.8171	-	-
Global Satisfaction Perception (GS)	-	-	-	0.9323	0.7339
GS1	3.36	1.5124	0.8209	-	-
GS2	2.72	1.4384	0.8913	-	-
GS3	3.57	1.8756	0.8905	-	-
GS4	2.64	1.6655	0.8347	-	-
GS5	3.60	1.6925	0.8436	-	-

A test of normality was then done. The results showed that all variables have a normal distribution. Reliability was evaluated by considering a standardized external load greater or slightly less than 0.70 (see Table 4). The elimination of these indicators resulted in an increase in composite reliability or Mean-Variance Extracted (AVE), as suggested by Hair et al. [67].

The model reliability indicators are shown below, once the elements that do not exceed the reliability cut have been eliminated. The AVE values (defined as the great average of the square of the indicators associated with the constructions), exceed 0.60, thus demonstrating the convergent validity for all cases. The composite reliability of the 4 constructs is also satisfactory as the values ranged from 0.85 to 0.93 (see Table 5).

**Table 5.** Evaluation of the measurement model (final elements).

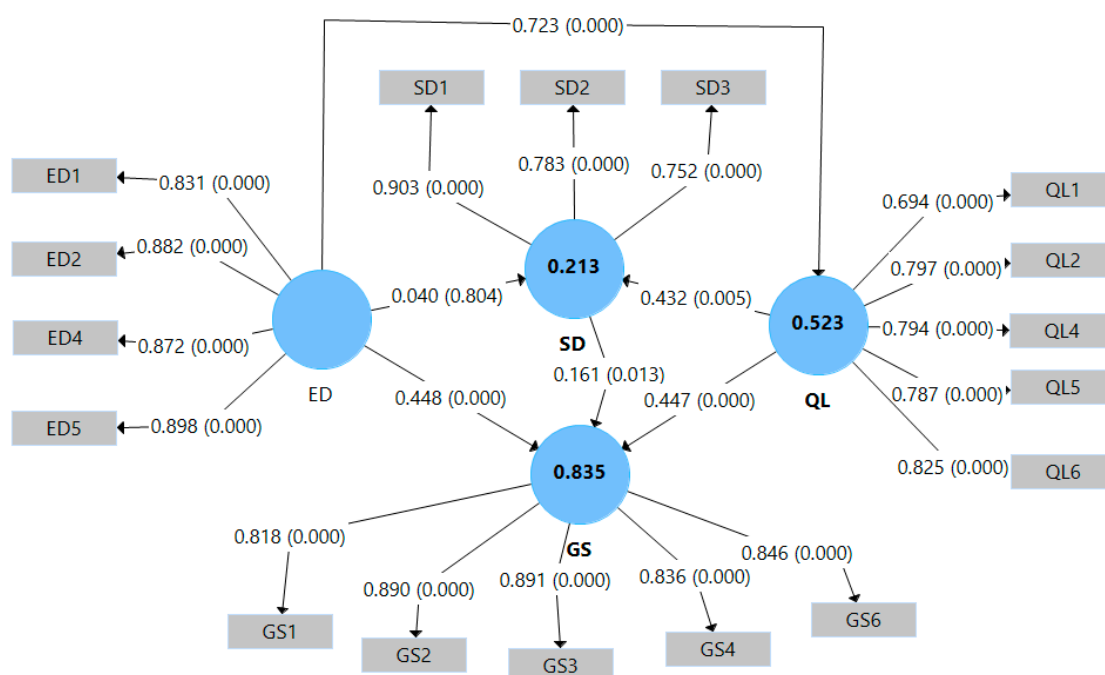
	AVE	Composite Reliability	R Square	Cronbach's Alpha
ED	0.7586	0.9263	-	0.8936
SD	0.6643	0.8551	0.2134	0.7553
QL	0.6092	0.8559	0.5232	0.8396
GS	0.7340	0.9323	0.8348	0.9090

Discriminant validity assessed using the criteria defined by Fornell and Larcker [68], which compares the square root of the AVE values with the correlation of the latent variable, was also satisfactory. In fact, as shown in Table 6, the square root of the AVE of each construct is greater than its correlation with any other construct.

**Table 6.** Matrix of correlation between latent variables.

	QL	ED	SD	GS
QL	0.7805			
ED	0.7233	0.8710		
SD	0.4611	0.3526	0.8151	
GS	0.8460	0.8288	0.5254	0.8567

To evaluate the structural model, the R-square for each dependent construct was analysed, as well as the meaning of the trajectories, using Bootstrapping [67]. Figure 2 shows the results of the estimation of the trajectory coefficients describing the relationships between the different perceptions of the respondents. The standard errors were bootstrapped by considering 2,500 sub-samples, created with observations randomly drawn from the original set of data (with replacement).



**Figure 2.** Estimation of the structural equation model. Notes: ED, Economic Development; SD, Social Development; QL, Quality of Life; GS, Global Satisfaction.

According to the results shown in Table 7, the latent endogenous variables of the model have a weak to moderate explanatory power. The model can explain 21.3% of the residents' perceptions of social development, 51.3% of those related to the quality of life and 83.5% of those associated with the sustainability of the village in terms of public use of the National Park (see Figure 2).

The results of the direct structural relations reveal that all the hypothetical relations are statistically significant, except the one referred to in Hypothesis 2. Four hypotheses are significant at a level of 1% (value  $p < 0.01$ ), hypothesis 6 is significant at 5% (value  $p < 0.05$ ). Social development (SD) is influenced by the quality of life (QL) but not by economic development (ED). On the other hand, QL is strongly influenced by ED (0.723). The results also show the positive and significant effects of ED and

QL constructs, with very similar importance (0.448 and 0.447, respectively), and to a lesser extent of SD (0.161).

**Table 7.** Tests of hypotheses for direct effects between latent variables.

	Original Sample	Standard Dev.	T-Statistic	<i>p</i> Values
H1. ED→GS	0.4484	0.0670	6.6884	0.0000
H2. ED→SD	0.0400	0.1671	0.2415	0.8108
H3. ED→QL	0.7233	0.0472	15.3085	0.0000
H4. QL→SD	0.4322	0.1586	2.7796	0.0055
H5. QL→GS	0.4475	0.0817	5.4785	0.0000
H6. SD→GS	0.1609	0.0627	2.5686	0.0114

## 5. Conclusions

The study analyses the effects of public use of National Parks in Spain on the perception of sustainability in their immediate geographical area. The evaluations of indicators associated with three dimensions of community sustainability are compiled: economic and social development and the quality of life of its people. The assessments are carried out by some of the main stakeholders such as the mayors of the villages. One advantage of choosing this type of participant is that we have the opinion of a person with quality information on the reality of each village. The villages selected are those included in what is known as the park's zone of influence, legally defined according to the criteria of geographical proximity to the protected natural area [61]. Both the choice of the respondents and the choice of the villages contribute to what has been done in the previous literature.

According to the results of the analysis, the perception of economic development conditions the perception of the quality of life, not being the same for the case of social development. Likewise, quality of life is influencing the perception of social development. The three dimensions analysed are affecting the community's perception of sustainability, with the social development dimension doing so to a lesser extent. The other two factors have a very similar average impact.

Once the results have been analysed, the park managers are encouraged to improve coordination between the resources of the protected natural environment and its area of influence. That is, greater collaboration between National Park managers, local companies, village authorities and public administrations. This, applied to current funding resources or their possible extension, would lead to the recommendation of the development of new activities and initiatives aimed at making these destinations more dynamic for tourism. Villagers and local businesses should be more involved in such initiatives. In this way, in addition to boosting their economy, it will be possible to develop an attitude and a feeling of pride in the intangible property of the natural resource that will have an impact on the sustainability of the resource and the environment itself.

In accordance with Eagles et al. [44], and Job et al. [54], the goals of sustainable tourism in protected areas include, in addition to offering the contemplation of the natural and cultural heritage of that environment through efficient long-term management, the implementation of management practices that minimize the negative impacts of the public use that is made and the maximization of the positive effects at the social, cultural, ecological and economic levels. The above will be done taking into account the evaluation of the indicators of each dimension analysed in this study and other previous ones [38,69].

Some advisable actions aimed at increasing the assessment of the perception of the sustainability of the National Park would be the following:

- To monitor the subsidies received by the localities in order to ensure the return of this investment and to redirect them if necessary in the future.
- A greater dynamization of the tourist activities associated with the traditions and customs of the localities. Here a benchmarking activity and the success stories in protected natural environments can be good references to propose new initiatives or improve the current ones.

- To carry out investments or redirect funds to improve the villagers' quality of life in terms of access to information and communication technologies, movement within the area and with other nearby villages/towns/cities, improvement of signposting of infrastructures, monuments or natural points of special interest in the area.

In accordance with this study, it is essential to stress the need for a sustainable tourism management model in Spanish National Parks that combines the perspective of environmental conservation with that of economic and social development and the quality of life of their closest villagers. The management model that would be most beneficial for the sustainability of National Parks and protected natural areas, in general, would be one that, from the conservation of natural resources, promotes public use of these areas in order to positively influence the economic growth of their closest area of influence.

Therefore, a more dynamic use of the public area near the park will cause an improvement in the economic indicators and this will be perceived as such by the residents of these areas. Once this improvement in the economic situation occurs, the direct and indirect effects on overall satisfaction with the protected area will increase. In addition, better use of public resources that provide infrastructure and communications will increase the quality of life of residents and directly and indirectly increase their satisfaction. This satisfaction will be key to the sustainability of the protected environment.

The results obtained in this paper for the National Parks can serve as an example for the rest of the areas and figures of protected spaces. Parks are the natural spaces with the greatest limitation in terms of public use. Thus, if sustainable management of the space is achieved, it will be the best proof that the sustainability of this type of environment can be achieved by generating sustainable development for its areas of influence while safeguarding its biological value.

Finally, the results of this study invite us to improve the work carried out and to continue investigating this interesting subject. It is true that it was decided to send a questionnaire with a few questions in order to get a high number of answers. Thus, the paper could be improved by increasing the number of items, that is, the detail of the components of each factor. In addition, in order to increase the number of responses, it might have been preferable to conduct a personal interview rather than using the telephone and the web form.

As future lines of work, it is proposed to carry out a characterisation of the managers, entrepreneurs and local authorities in those National Parks or other protected natural environments that are proving to be a successful tourist destination. This will help to focus on funds and efforts on the development of these characteristics in the National Parks and their nearest villages.

In addition, the perception of sustainability of other very important stakeholders for the sustainable development of these communities taking into account the public use that has been given in recent years and the potential that still presents for the future. Thus, the local business mass or the villagers themselves should be taken into account in future work.

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## **CAPÍTULO 2**




**El negocio del turismo en los parques nacionales españoles: Una perspectiva multidimensional del turismo sostenible**

**Tourism Business in Spanish National Parks: A Multidimensional Perspective of Sustainable Tourism**



## Article

# Tourism Business in Spanish National Parks: A Multidimensional Perspective of Sustainable Tourism

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**Abstract:** In recent years, nature tourism has increased its prominence in the tourism market due to sociocultural change and greater concern for the environment in our society. In this sense, Spanish national parks have become important tourist destinations, increasing the number of visitors significantly in the last decade, exceeding 14.81 million in 2019. In addition to their incalculable ecological value, these protected natural spaces are a key factor in achieving the socioeconomic development of their rural area of influence. The main objective of the study is to contrast the development experienced by tourist businesses in the areas of socioeconomic influence of the Spanish national parks. This has been done from a multidimensional perspective: infrastructures, socioeconomic development, and the perception of the residents belonging to the area of influence of the parks. The indicators associated with each dimension have been compiled and a logit model was used to contrast the relationships between the different variables. The results confirmed that perceived economic development and infrastructure have a significant impact on tourism businesses. In conclusion, local socioeconomic development requires greater effective public–private partnerships to achieve business prosperity and a better quality of life as factors for the sustainability of nature tourism in national parks.

**Keywords:** tourism business; nature tourism; sustainable tourism; national parks



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## 1. Introduction

The tourism industry has a great weight in the world economy. Specifically, in 2019, it accounted for 10.4% of global GDP [1]. In the case of Spain, this percentage was even higher, reaching 12.4% [2].

According to the World Tourism Organization, Spain is a world-wide benchmark in the tourism sector, positioning itself as the second tourist destination in the world, behind France. In 2019, it received approximately 84 million international travellers [3].

Among the different types of tourism, nature tourism is highly relevant, representing 15% of total tourism in 2018 [4–6].

In this scenario, it is necessary to value the fact that Spain is a country with a high natural and ecological interest, being one of the nationalities with the greatest biodiversity in the European Union and, in general, in the world [7]. Proof of this is that 28.12% of its land surface and 12.76% of its marine surface is covered by some form of protection, either by national, regional, or international instruments [8]. Furthermore, within the European framework, it is the country with the highest number of protected natural areas accredited with the European Charter for Sustainable Tourism [9]. Although the total number of protected areas it possesses exceeds 4000, its 16 national parks stand out especially [8].

Spain's relationship with environmental protection dates back more than a century, being a pioneer in joining the protectionism of natural spaces, approving the first law of national parks in the world in 1916 [10,11]. Throughout history, the public use of these

environments has evolved favourably. Regarding the number of visits, it has increased by 47% in the last ten years, exceeding the 14.81 million visitors in 2019 [12].

The benefits of protected areas are innumerable. Among them, the conservation of nature for future generations, the mitigation of the impacts of climate change, in addition to being an excellent source of economic and social development and poverty reduction, particularly in its closest areas of influence [13,14].

For all these reasons, the strengths that Spain has regarding its tourism leadership and the authenticity of its natural resources must be maximized, in such a way that they result in a series of advantages for the rural development of its inland areas.

It should also be mentioned that the pandemic caused by COVID-19 has seriously affected the tourism industry in general, however, it is true that its effect has been less in sectors such as rural or nature tourism [15]. This further supports, if possible, the relevance of this type of tourism today, as it can act as a driving force in the recovery of the tourism industry. Thus, one of the consequences of the pandemic has been the enhancement of protected areas in terms of human health and well-being [16].

In previous works it is common to find studies that analyse the business tourism development of different rural areas, or else focusing only on some specific protected areas. However, this analysis has not been carried out from a global perspective at the national park network level.

In this context, the objective of this study is to analyse rural development as a sustainable tourist destination experienced by the peninsular Spanish national parks through the study of the various dimensions, such as business, infrastructure, socioeconomic, and perception dimensions of the local residents. Ultimately, this work tries to answer the following question: what factors are determining factors in the tourism business development of Spanish national parks?

This work may be of great interest for achieving rural development and tourism competitiveness in rural inland destinations in a sustainable way.

Regarding the structure of the work, firstly, reference will be made to the theoretical framework on nature tourism in protected areas and its consequent effects. Secondly, it will refer to the materials and methods used, a description of the sample and the study variables. Fourth, the results obtained will be presented, with a brief explanation. Finally, the work will end with the discussion and conclusions based on the results explained above.

## 2. Conceptual Framework

### 2.1. Protected Areas

Protected areas are terrestrial or marine spaces declared by means of legal instruments and specially oriented to environmental conservation as well as biological and cultural resources [17].

According to the International Union for the Conservation of Nature in the world there are a total of 252,402 terrestrial protected areas and 17,959 marine areas, which represents 15.73% and 7.92%, respectively, of the planet's surface. In the last ten years, the growing trend in the declaration of protected areas worldwide has been very notable, especially as regards marine areas [8,18].

The origins of protectionism date back to 1872, in the United States, when Yellowstone national park was created. This same protectionist model was transferred to countries such as Canada (1888), Sweden (1909), Russia (1912), Switzerland (1914), and Spain (1918) [19,20].

These first protected areas, declared in the mid-nineteenth century, were mainly based on preserving certain spaces in a sacred way from human activity. However, this purpose evolved over time to encompass other areas and needs of society, such as recreation and sustainable development [21,22].

Therefore, the declaration of these spaces is a powerful tool at the global level to achieve goals and face such extremely important challenges today, from the point of view of sustainability, such as the Sustainable Development Goals of UNESCO and the Rio Conventions of the United Nations [23,24].

## 2.2. Sustainable Tourism in Natural Areas

Tourism is considered as an engine of regional and local economic development, which improves the economic situation and quality of life of the population [25–29]. Among the socioeconomic benefits generated by tourism, it is worth highlighting its capacity to generate employment, the distribution of income, and its consequent reduction in economic inequality or the improvement of tourist infrastructures related to leisure, accommodation, transport, etc. [30,31].

With the passage of time, the awareness and concern of humans for the conservation of the environment has increased and this is reflected in the rise of sustainable tourism, becoming a typology with great notoriety in the tourism scene [32].

Sustainable tourism can be defined as that type of tourism that respects the natural resources, customs, traditions, and culture of the local population and takes into account the interests of all stakeholders [33–35]. The foregoing must also be extended to the long term, so that it must provide the necessary protection to ensure a situation of use and enjoyment of the natural environment such as the current one in the future [36,37].

All the socioeconomic improvements of the tourism industry can be transferred to the modality of rural and nature tourism. It becomes a mechanism that stimulates the economy of rural areas, since it promotes socioeconomic development through their culture and traditions [38–40], generating employment [41], promoting their local products and services [42,43], providing new sources of income [44,45], providing services and infrastructures and, in general, improving the quality of life of the local population [46,47].

As has been said at the beginning of this work, Spain is one of the countries in Europe richest in biodiversity and whose rural environment reaches 85% of its territory. This wealth in both areas makes rural and nature tourism a great engine of economic development [48].

Previous literature determines that responsible and nature tourism in territories characterized by their rich resources is positioned as an excellent way to achieve economic development [49–52]. Along the same lines, national parks are highly attractive destinations, and this makes them ideal figures for tourism development [53,54]. This is highly beneficial for its local economy, which can recover from the economic losses posed by the restrictions inherent to its declaration, through tourist spending [55–58].

Likewise, tourism must consider numerous dimensions given the multi-dimensionality that characterizes it [59]. However, this multidimensionality is further enhanced when we refer to sustainable tourism, since there are even more areas that closely interfere (social, economic, environmental, cultural, technological, or political), in addition to being interdependent between themselves [60–62]. Consequently, this must be transferred to the search for indicators when conducting studies, which must cover different dimensions to obtain an integrative and holistic character [60].

One of the main premises of sustainable tourism is that it must entail sustainable economic development, properly speaking, through a uniform distribution of the benefits obtained [60].

The presence of this rural and nature tourism offers a great opportunity for local rural tourism agents [63]. To this end, these entrepreneurs must expand their tourism offer, developing their products and services to attract tourists, greater satisfaction of demand and, consequently, their loyalty [64,65].

So, from a business perspective, this type of tourism favours the economic growth of small businesses located in these rural areas, providing an impetus for their economic development through the creation and maintenance of businesses [66–68].

Apart from the economic factors and the natural resources that this type of destination house, infrastructures are a factor of great importance in tourist competitiveness [69,70]. In other words, having an optimal transport infrastructure can be considered the foundation of the tourist development of a destination, being necessary to attract tourists [71,72].

In this sense, there are studies that determine that environmental resources, economic factors, and infrastructures are three elements that have a positive and direct impact on sustainable business tourism development [73]. In addition, the income generated by

tourism in these spaces can revert to the creation of sustainable infrastructures in the vicinity of protected areas [74].

Thus, government authorities must commit to the development of infrastructures that meet both the needs of tourists and the local population [75].

Furthermore, numerous studies have confirmed the existence of a link between the declaration of national parks and local development [76–79]. In this way, it can be confirmed that protectionism not only responds to environmental problems, but also affects the rural development of local communities [80–82].

Likewise, tourist activity in natural areas, understood as a clean industry, stands out for its role in sustainability, thanks to its power to generate wealth in mainly rural environments, while ensuring the preservation of natural resources, customs and culture of the place [83,84]. In other words, sustainability from the social point of view implies respecting the cultural identity of the local population and their customs [60].

Regarding the local population, there are numerous studies that analyse their perceptions of tourism. From them, it can be deduced that the perception of residents plays a key role in the process of sustainable tourism development [85].

One of the aspects most appreciated by the local population in terms of tourism is the economic benefit that it brings [86]. In this sense, as the local inhabitants recognize the economic development obtained by the protection of nature, the more they will become involved in its management [87,88]. Likewise, reducing negative impacts on the environment and improving the quality of life of residents lead to greater success in the tourism sector and its approach towards sustainability [75,85,89].

Therefore, given the great importance of the local population, their participation in decision-making in the tourist management of these spaces is essential, and their actions should not be reduced simply to a secondary role [90,91].

In this way, showing the importance that the business dimensions, infrastructure, as well as socioeconomic and local perception have on the sustainable tourist development of natural destinations, in order to demonstrate its effect in the case of national parks, the following hypotheses can be raised:

**Hypothesis 1 (H1).** *Infrastructure has a significant effect on business development associated with sustainable tourism in Spanish national parks.*

**Hypothesis 2 (H2).** *Socioeconomic dimension generates a significant effect on business development associated with sustainable tourism in Spanish national parks.*

**Hypothesis 3 (H3).** *The perception of the residents has a significant effect on business development associated with sustainable tourism in Spanish national parks.*

### 3. Materials and Methods

#### 3.1. Sample and Variables

The sample is made up of the municipalities located in the zones of socioeconomic influence of the peninsular Spanish national parks. For this, the zoning established in the declarative laws of each of the national parks has been considered [92]. The work sample was of convenience and a total of 103 valid cases were obtained when performing the cluster conglomerate analysis. In the selection of the sample of national parks, those that were located in archipelagos (Balearic or Canary) have not been included because it would be very difficult to dissociate sun and beach tourism from nature tourism. In the inland parks, the visits are surely more motivated by the values associated with nature tourism, which is the objective of our analysis. Table 1 shows the national parks under study, as well as their main characteristics.

**Table 1.** Characteristics of the national parks under study.

National Park	Hectares	No. of Villages	Inhabitants (2020)	Total Visits (2019)	Location	Declaration Year
Aigüestortes	145,057.75	10	13,801	560,723	Lleida	1955
Cabañeros	182,292.52	6	4,781	100,493	Ciudad Real, Toledo	1995
Doñana	200,601.86	4	44,976	388,325	Huelva, Sevilla	1969
Monfragüe	195,500.73	14	12,267	457,555	Cáceres	2007
Ordesa	89,290.44	6	1822	915,144	Huesca,	1918
Picos de Europa	133,683.56	11	14,164	1,791,410	Asturias, León, Cantabria	1918
Sierra de Guadarrama	175,593.40	34	150,369	1,519,039	Madrid, Segovia	2013
Sierra Nevada	266,690.91	44	69,841	789,756	Granada, Almería	1999
Tablas de Daimiel	82,113.86	3	30,644	157,424	Ciudad Real	1973

The variables used correspond to different representative dimensions of the sustainability of protected natural areas, such as the business sphere, infrastructures, socioeconomic and local perception (see Table 2).

**Table 2.** Study variables.

Dimension	Variables	Description
Business	EIE	Operating Income (€). Average 2017–19
	ERE	Economic Profitability (%). Average 2017–19
Infrastructures	IDA	Distance to the nearest airport (km). Average
	IDT	Distance to nearest train stop (km). Average
Socioeconomic	SP	Population. 2017
	SPA	Budgets Village Halls (€). 2017
Local perception	PDE	Economic development
	PDS	Social development
	PSG	Global Satisfaction

Regarding data collection, to obtain the information on the study variables, we have worked with secondary and primary data.

Regarding secondary data, the economic variables referring to operating income and economic profitability of tourist companies were obtained through the SABI (Iberian Balance Analysis System) database [93]. Data have been extracted from the annual accounts of the companies for the years 2017, 2018 and 2019. The companies were selected by filtering by the CNAE code (National Classification of Economic Activities) [94]. In all cases, the selected companies had their headquarters in the villages near the national parks analysed.

Regarding the dimension related to infrastructures, the distance to the nearest airport or train was obtained through Google Maps. The limitation of having a greater number of representative variables of the village infrastructures reduces the infrastructures to only two variables associated with the accessibility to the tourist destination, such as distances from an airport to a railway station.

Regarding the socioeconomic indicators, these were extracted from Spanish government sources, such as the National Institute of Statistics and the Ministry of Finance and Public Function [95,96]. As in the previous group of variables, only socioeconomic information associated with city councils and population budgets has been collected. In the analyses, the variations between years were used as a proxy for the improvement of the socioeconomic situation of the villages.

Regarding primary data, local perception variables were collected through a questionnaire used in the previous study by Pérez-Calderón et al. [97]. Data referring to the location and year of declaration of the national park have been compiled from the annual reports published by the government ministry [98].



### 3.2. Data Analysis

The methodology used was a K-means cluster analysis that classifies the data according to the observed variances, forming homogeneous clusters that are different from each other. Thus, the municipalities that reside in the zones of socioeconomic influence of the national parks have been categorized based on the variables of the tourist companies located in them and the perception of the economic development of the local managers. These business variables are, on the one hand, operating income, an indicator of the productive capacity of companies; and, on the other hand, the economic profitability, revealing of the operation of these.

First, Ward's method and the Euclidean distance were followed to ascertain the optimal number of clusters through the dendrogram [99]. The level of significance that has been considered is greater than 99%.

Additionally, a binary logistic regression analysis was used to find out the variables that influence the tourism development of companies located in Spanish national parks.

The logistic regression model is used to know the probability of occurrence of an event, through a linear predictor based on the maximum likelihood method [100–102]. The probability of the event taking place or not is expressed as follows:

$$\begin{aligned} \text{Prob}(Y = 1) &= F(x, \beta) \\ \text{Prob}(Y = 0) &= 1 - F(x, \beta) \end{aligned} \quad (1)$$

where  $x$  are the independent variables and  $\beta$  are the parameters that determine how changes in these variables modify the probability.

In this work, this model is used to predict the probability of belonging to a group of municipalities with more profitable tourism companies and with a higher volume of income.

On the one hand, the dependent variables refer to two types of municipalities classified by the cluster analysis. In other words, the dependent variable determined belonging to the group of municipalities with the most profitable companies and with the highest volume of income (G1) or to the group of municipalities with companies with profitability and low-middle income (G2-3). That is, two binary logistic regression models were performed, one for each group of municipalities, where  $Y$  acted as a dichotomous variable with value  $Y = 1$  if it belonged to the group of municipalities in question; while  $Y = 0$  otherwise.

On the other hand, the independent variables were socioeconomic, infrastructure, and local perception of the sustainability of national parks. The purpose of the hypothesis test is to check the effect of the independent variables on the dependent variable.

The equation that represents the proposed logit model is the following:

$$\text{Logit } P(Y_i = 1 | \beta, X_i) = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_k X_{ik}, i = 1, \dots, n + \varepsilon \quad (2)$$

where  $Y$  is the dependent variable in the linear regression model and  $\varepsilon$  the random error.

The independent variables were introduced into the logistic regression model, and it was verified if there was a significant sign change of the  $\beta$  coefficient to verify the proposed model.

The Wald test was used to determine the significance of the independent variables, and its significance value must be less than 0.05 to be able to affirm that the regression coefficient is significant at a confidence level of 5% [103].

## 4. Results

### 4.1. Descriptive Statistics

As a preliminary step, Table 3 shows the descriptive statistics for each of the variables under study in this work at the level of the peninsular Spanish national parks network.



**Table 3.** Descriptive statistics of the variables under study.

Variables	Min	Max	Average	Std. Desv.
EIE	15,565.33	1,134,482.73	315,237.30	251,549.17
ERE	−104.24	35.40	−0.39	16.76
IDA	26.70	223.00	96.75	43.61
IDT	0.00	97.30	37.69	25.66
SP	61.00	18,995.00	2037.07	3411.34
SPA	13,742.18	12,173,408.92	1,203,865.15	1,904,177.78
PDE	1.33	6.33	3.71	1.23
PDS	1.00	6.50	3.84	1.38
PSG	1.00	5.60	2.87	1.33

Taking into account the business perspective, tourism companies located in the zones of socioeconomic influence of the inland national parks have an average operating income of € 315,237.30. It can also be seen that they have a slightly negative economic profitability (−0.39%).

On the other hand, considering the infrastructure dimension, the average distance from the set of national parks to the nearest airport is 96.75 km and to the train station is 37.69 km.

Regarding the sociodemographic sphere, the municipalities have a population that ranges from a minimum of 61 inhabitants to a maximum of 18,995. This great variation between minimum and maximum is also notable in public budgets.

Regarding the perception of the sustainability of national parks by the local agents of the municipalities located in the zones of socio-economic influence, we can highlight the highest score in the sphere referring to social development (3.84), followed by economic development (3.71), with the dimension that reports the lowest score being global satisfaction (2.87).

#### 4.2. Cluster Analysis *k*-Means

In the first place, referring to the cluster analysis, three different groups of municipalities have been obtained. ANOVA was used to determine if the clusters were classified correctly, showing a significance level of 0.0%.

The groups have been categorized based on the differences between the average values of operating income and the economic profitability of the tourist companies located in the municipalities under study and the economic development perceived by local managers (see Table 4). Thus, cluster 1 corresponds to those municipalities whose tourism business fabric is characterized by high operating income, high profitability, and high perception of economic development. Conglomerate 2 brings together the municipalities in which the companies with average operating income and profitability and a low valuation of the perceived economic development are located. Cluster 3 groups the localities with the poorest tourist companies, with the lowest operating income, minimal profitability, and medium perception of economic development.

**Table 4.** Final cluster.

Variables	Cluster			ANOVA
	G1	G2	G3	Sig.
EIE	885,601.16	380,101.01	100,310.16	0.000
ERE	10.47	4.49	−8.68	0.000
PDE	4.52	3.07	3.99	0.000
N. cases	21	48	34	0.000

#### 4.3. Binary Logistic Regression Analysis

Second, the results of the binary logistic regression analysis are presented.

First, the global fit of the model was analysed using the omnibus test. With this test, it is possible to check whether the study model represents an improvement in the reference model. For this, the Chi-square test is taken into consideration, and it is observed if there is a significant difference between the -2LL of the reference model and the proposed model [104]. The results can be seen in Table 5.

**Table 5.** Omnibus test.

	Chi-Square	df	Sig.
Model	33.631	7	0.000

Therefore, since the Chi-square value is significant, the new model is significantly better than the reference model. According to this test, the level of significance ( $p = 0$ ) implies that the model is statistically significant and can be used to make predictions.

Likewise, the  $R^2$  of the model was analysed (see Table 6), which determines the proportion of the variation that can be explained. Thus, the value zero means that the model has no predictive value, while the value one indicates a perfect fit [105]. Specifically, the Cox–Snell and Nagelkerke indicators [106,107] have been used in this study.

**Table 6.** Model Summary.

–2 Log Likelihood	Cox & Snell $R^2$	Nagelkerke $R^2$
24.999	0.497	0.712

Thus, the coefficient of  $R^2$  of Cox–Snell (0.497) and the coefficient of  $R^2$  of Nagelkerke (0.712) indicate that the variation of the dependent variables explained by the model is very high. Using other terminology, this model explains 49.7% of the variation in the result or 71.2%, depending on the indicator that we take as a reference.

On the other hand, the goodness of fit of the logistic regression model has been calculated using the Hosmer–Lemeshow test, as can be seen in Table 7.

**Table 7.** Model goodness-fit test. Hosmer and Lemeshow test.

Villages with the Most Profitable Companies (G1)			Villages with the Least Profitable Businesses (G2-3)		
Chi-square	df	Sig.	Chi-square	df	Sig.
0.613	8	1.000	5.242	8	0.731

The results of the chi-square coefficients of the Hosmer–Lemeshow test show that there are no significant differences between the observed values and the values predicted by the model.

Finally, Table 8 presents the results of the logit model. The independent variables were introduced into the model, and it was verified if there was a significant change in the sign of the coefficient B to verify the proposed model.

To determine the significance of the variables entered in the model, the value Sig. must be fixed, and must be less than 0.05. Therefore, the variables perception of economic development (PDE) and distance to the train (IDT) are significant, while the rest of the variables introduced in the model do not have a significant impact.

Hence, the summary of the proposed logit model determines that with a percentage of cases of 89.8% correctly classified, there is a 95% probability that a greater local perception of the economic development of the municipalities located in the areas of socioeconomic influence of the national parks and a greater proximity in terms of transport infrastructures (distance to the train) determine the belonging to a group of municipalities with the tourist companies with the highest economic profitability and operating income.

Furthermore, the fact that these same variables are significant in both groups and with great differentiating power in the opposite direction support the results of the cluster.

**Table 8.** Summary of binary logistic regression analysis.

Independent Variables	Dependent Variables					
	Villages with the Most Profitable Companies (G1)			Villages with the Least Profitable Businesses (G2-3)		
	B	Sig.	Exp(B)	B	Sig.	Exp(B)
PDE	3.770	0.018	43.393	−3.770	0.018	0.023
PDS	0.956	0.197	2.600	−0.956	0.197	0.385
PSG	−1.866	0.060	0.155	1.866	0.060	6.462
IDA	−0.005	0.771	0.995	0.005	0.771	1.005
IDT	−0.067	0.029	0.935	0.067	0.029	1.069
SP	0.001	0.658	1.001	−0.001	0.658	0.999
SPA	0.000	0.112	1.000	0.000	0.112	1.000
% Classification	89.8%			89.8%		

## 5. Discussion & Conclusions

This study analyses the relationships that exist between the different dimensions present in the management of Spanish national parks, from the point of view of the tourist business offer. Specifically, variables related to business, infrastructure, as well as socioeconomic and local perception dimensions have been analysed.

According to the results of the analysis, it appears that the tourist companies located in the municipalities of the zones of socioeconomic influence of the Spanish national parks in the interior have a productive capacity and performance that are very different from each other.

The results of this study denote the importance of the perception of the local population and the infrastructures in the tourist development and management of protected natural spaces. In particular, the results show that a favourable perception of economic development by residents and the proximity to railway infrastructures have a significant relationship in the business development of tourism companies.

It is essential that residents perceive the economic development that nature tourism can provide in these types of spaces. This tourist activity can contribute to the rural development so badly needed by these rural areas, marked by depopulation and by dependence on the activities of the primary sector, currently in decline. In addition, these are areas that, due to the category of environmental protection they enjoy, have numerous limitations in terms of the exploitation of their public use, considering this sustainable tourism as a good development option for their regional, or local economy, and even more so considering the boom that this type of tourism has been experiencing for a few years due to the change in tourist demands.

Given the different dimensions that the management of protected natural spaces encompasses, it is necessary to implement integrative measures and territorial management instruments aimed at tourism sustainability, improvement of the quality of life of the local population, and preservation of natural resources.

For this, it is inescapable to bet on an improvement of tourist infrastructures, always considering the particularities of this type of pristine destination, in such a way that ecological and natural values are not affected. This infrastructure development must be focused not only on tourist needs, but also on the needs of the local population. It is important that local communities perceive this development and enjoy its benefits. Therefore, it is necessary to invest in a good transport network, in telecommunications, in medical and commercial services, among others.

At the same time, it is necessary to support those tourism companies that provide their services in these spaces, while promoting the rural development of local populations.

In this sense, entrepreneurs must adapt to the environment in which they are located and offer services based on interaction with nature, in accordance with environmental requirements and tourist demands. In addition, the role played by the national, regional, and municipal governments in regulating the limitations implicit in the declaration of these spaces is essential.

Moreover, it is essential to convey to the local community, businessmen, and tourists the importance of the conservation of natural and cultural resources and tourism in these spaces. For example, this awareness can be raised through programs and workshops promoted by the public sector that extol the advantages and opportunities of living in the zones of socio-economic influence of this type of protected area.

Regarding the limitations of this work, it could be improved by debugging and expanding the search for the data. Specifically, we would be referring to an update of the socioeconomic and infrastructure variables. Another limitation of this study is the low representation of some national parks considering certain variables, such as those referring to the business dimension and local perception. Additionally, it would be very interesting to include in the study a dimension referring to ecological resources, given the uniqueness of this type of destination and the number of visitors.

Finally, one of the main problems of this type of nature tourism, especially in protected areas, is the uncontrolled growth in the number of tourists. In this sense, it must be considered that the use and exploitation of these geographical areas become highly regulated, not only for tourism, but also agricultural, livestock, and industrial purposes, which presents a traditional conflict of interest for residents in harming their economic prosperity. Despite the above, the problem of over-tourism threatens this segment of the tourism business, and it is a promising future line of research with previous reference papers [108,109].

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## **CAPÍTULO 3**




**Desarrollo rural percibido en los Geoparques Mundiales de la Unesco  
en España**

**Perceived Rural Development in UNESCO Global Geoparks in Spain**



## Article

# Perceived Rural Development in UNESCO Global Geoparks in Spain

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**Abstract:** The tourism management of geoparks is an excellent way of achieving sustainable development in rural areas and improving the quality of life of the resident population while respecting their natural and cultural heritage. Spain is the country with the second highest number of geoparks in the world and the first in Europe. This study aims to find out how rural development is perceived by the highest political representatives of the municipalities affected by the declaration of geoparks in Spain, considering the dimensions of economic and social development and the infrastructures of the environment. Data were collected through a questionnaire and analysed with the structural equation modelling technique. The results reveal that the local perception of the geopark declaration is conditioned, firstly, by the perceived economic and tourism development, followed by the development of the surrounding infrastructure and social development. In conclusion, good tourism planning in these areas, increased recreational use, and the services offered by local businesses are necessary to improve the way of life for these rural populations.

**Keywords:** rural development; tourism business management; geoparks; geotourism; sustainable tourism; partial least squares; resident perception

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## 1. Introduction

In recent years, Spain has been visited by more than 80 million foreign tourists, making it one of the world's top tourist destinations [1]. This sector is crucial to the country's economy, accounting for 12.4% of its gross domestic product in the same year [2].

Among the country's many tourist attractions, its rich natural and cultural heritage is particularly noteworthy. As proof of this, it is the fourth country out of 167 with the highest number of UNESCO World Heritage sites in the world [3]. Similarly, Spain is the second country in the world, after China, with the most geoparks recognised by UNESCO and the first in Europe [4]. This invaluable natural heritage is an excellent means of achieving socio-economic development in rural areas [5,6].

In this scenario, it is important to note the role of geotourism. This tourism modality is on the rise all over the world and is characterised by the search for sustainability in its destinations [7–9]. The places par excellence for this type of tourism are the geoparks [10]. In these areas, geological heritage is proposed as a driving force for the sustainability of local development, also representing a sign of identity for the territory [11,12]. However, given their novelty, geoparks remain a relatively unknown concept in society [13].

The beauty of their landscapes and their cultural uniqueness make geoparks excellent tourist destinations. It is impossible to know the exact number of visitors who choose Spanish Geoparks as a destination, due to their open nature and free access, but some studies estimate that these environments are visited by approximately 10 million people per year [14].

In recent years, research that has analysed the concepts of geoparks and geotourism has increased significantly from different perspectives: geodiversity conservation visitor

numbers and carrying capacity [15], tourist profiles [7], and the conservation of cultural heritage [16], among others.

From a socio-economic point of view, geotourism and geoparks are excellent instruments to achieve rural development, as they improve the economy through increased visitor numbers, create new employment opportunities, and reduce the depopulation of rural areas [16].

On the other hand, tourism activity in popular destinations undoubtedly affects the way of life of the resident population, whose perceptions will vary according to the impact it has on their socio-economic environment [17]. Furthermore, knowledge of the perceptions of the local population is a crucial aspect of sustainable tourism management [18–20], which is even more relevant in a natural destination such as a geopark [21].

Therefore, this paper analyses the local perception of the municipalities that make up the Spanish Geoparks with regard to the sustainability of the environment between 2009–2019, considering different dimensions associated with local development derived from tourism: economic development, social development, and development of the infrastructure of the environment. In other words, the objective is to answer the following questions: Do the local populations perceive sustainable development as a consequence of tourism in the Spanish Geoparks? What are the dimensions that most influence the local perceptions of sustainable development?

The findings of this research will be of great use to political institutions (local and regional), tourism stakeholders, and management bodies of Spanish Geoparks in determining local development strategies in socio-economically depressed rural areas.

Unlike other studies that have only analysed a limited area or a small number of geoparks, this research covers all the geoparks located throughout Spain. Furthermore, the fact that Spain is a world leader in tourism, the great importance of its natural and cultural heritage, and the need to raise awareness of the opportunities of geotourism provide an important justification for this research.

About the structure of this work: firstly, a brief review is made of the history of geoparks in Spain, and the importance of geotourism in socio-economic development is highlighted. In the third section, the methodology used in the data processing is presented. Subsequently, the results are presented, and finally, the paper ends with a series of conclusions.

## 2. Theoretical Framework

### 2.1. A Brief Overview of the History of Geoparks in Spain

According to UNESCO's definition, geoparks are unique territories characterised by an internationally outstanding geological heritage and the promotion of sustainable development [22].

The history of geoparks dates back to the year 2000 when rural areas in four European countries (France, Greece, Germany, and Spain) joined forces to enhance the value of their geological resources by creating the European Geoparks Network [23,24].

This cataloging was expanded in 2004, when UNESCO joined this initiative and created the Global Geoparks Network, with the idea of being represented in the rest of the world [23,25,26]. Finally, the continued work of UNESCO led to the creation of a new label in 2015, which is what we know today as the UNESCO Global Geoparks [22]. In this way, the UNESCO Global Geoparks Programme (UGGp) emerges as an innovative and integrating proposal that encompasses different areas of sustainability [27].

Further deepening the mission of the UNESCO Global Geoparks program, geological heritage is presented as the central axis which, linked to the natural and cultural resources of the territory, aims to raise society's awareness of the many challenges we face from a social and environmental point of view. It also maximises the participation of local communities in this quest for sustainable development [28]. As mentioned above, Spain was a pioneer in the creation of this type of space, being one of the founding members at the beginning of the project [23,29]. In terms of their legal status, they are considered

protected areas under international instruments [30]. In addition, it is necessary to point out that this declaration must be subject to strict quality control, undergoing a revalidation every 4 years to check that these sites continue to meet the requirements [29].

## 2.2. Geotourism and Sustainable Development

The fundamental reasons why geoparks stand out are fundamentally centered on the reinforcement of cultural identity, the conservation of natural resources, and the search for sustainable economic development through geotourism [22]. In this sense, numerous studies endorse the relationship between the declaration of this type of area and the generation of employment and the creation of new businesses [31–33], greater participation of the local population in geoconservation [34], the improvement of residents' living conditions [13,35], the importance of governance [36], and the achievement of the Sustainable Development Goals [37], among other aspects.

Focusing on other continents, such as Asia or Africa, this type of space provides an excellent opportunity to achieve sustainable development, promote heritage conservation, and eradicate poverty [37–39].

The first definition of geotourism was provided by Hose in 1995, who defined it as a form of tourism that not only consists of the appreciation of the landscape but also allows tourists to get to know the geomorphology of a place [40].

In short, the objective pursued by this type of tourism focuses on the search for a balance between the conservation of the geological heritage and the development of the area for tourism [9,32,41,42], making the UNESCO Global Geoparks an ideal figure to achieve the sustainable development of rural areas [9,37,43,44].

According to the World Tourism Organisation, sustainable tourism takes into account different dimensions that affect society from a present and future perspective including environmental, economic, and social impacts, as well as the well-being of the local population [45]. In other words, sustainability seeks to maximise the benefits of tourism activity without detracting from the available resources, in such a way that it results in an improvement, in all aspects, in the way of life of the resident population [17,46]. Thus, the role of the local population in sustainability is essential. According to many authors, the development of sustainable tourism activity is only possible by integrating the resident population in the development of tourism policies [19,47–49].

In general terms, there is extensive literature that supports the relationship between the tourism impacts perceived by residents and their attitude towards tourism activity. In this sense, these impacts can basically be categorised into positive and negative externalities [20,50–52].

For the population living in the vicinity of a geopark, the economic component generated by tourism is fundamental [53]. In particular, previous studies have shown that the greater the economic development derived from tourism, the more positive the attitude of the residents [54], especially when it comes to environmentally friendly tourism [55]. Numerous authors have also highlighted the relationship between residents' perceptions and economic development in terms of increased recreational use [56], employment generation [57], and better opportunities for local businesses [58], among others.

On the other hand, previous literature has pointed out that well-managed tourism development leads to an improvement in the quality of life of society, helps to keep customs alive, and preserves cultural heritage [59]. Other authors also postulate that adequate tourism activity generates greater environmental awareness among the residents [60].

Based on the above studies, the following hypotheses can be stated:

**Hypothesis 1 (H1).** *Local perceptions of economic development influence the overall perception of the sustainability of geoparks.*

**Hypothesis 2 (H2).** *The local perception of economic development influences the perception of the social development of the population.*

It is important to note that one of the purposes of protected areas is the development of populations by keeping the resident population in their environment and minimising the effects of rural depopulation [61]. However, previous studies have determined that the tourist activity generated around different protected areas has not managed to prevent the depopulation of their essentially rural municipalities [61,62].

Despite the many positive impacts of tourism, indeed, it can sometimes become a threat to the social development of the residents, in terms of the preservation of cultural heritage and traditions [63]. In this sense, studies show that the perceived loss of local identity leads to a hostile attitude towards tourism development [20,64,65].

The following hypothesis is therefore proposed:

**Hypothesis 3 (H3).** *Local perceptions of social development influence global perceptions of the sustainability of geoparks.*

Other research has shown a relationship between economic development as a result of tourism in protected areas and investment in more environmentally sustainable infrastructure [66]. In other words, the income generated by the tourism sector is reinvested in the improvement of infrastructure and services related to transport, education, and health, among others [67].

In addition, it has also been shown that the improvement of the environment, in terms of infrastructure and services offered to the community, has an important impact on the social development of the population and, consequently, on their perception of it [68,69]. The infrastructure of an environment is a fundamental aspect of the sustainable development of society, as it offers essential services such as electricity, water, communication technologies, accessibility in terms of travel, etc. [70].

In this sense, the literature supports the relationship between the development of transport infrastructure and the improvement of the quality of life of residents [68,71]. Research has also highlighted the importance of infrastructure related to accessibility and connectivity in the development of society, as it prevents or reduces the social exclusion of a geographical area [72,73].

Given the above, the following hypotheses are proposed:

**Hypothesis 4 (H4).** *The local perception of economic development influences the perception of the surrounding infrastructure.*

**Hypothesis 5 (H5).** *The local perception of the development of the surrounding infrastructure influences the overall perception of the sustainability of the population.*

**Hypothesis 6 (H6).** *The local perception of the development of the surrounding infrastructure influences the perception of the social development of the population.*

Finally, the formulation of these hypotheses aims to determine the resident population's perception of the sustainability of their environment as a consequence of the geopark declaration.

Figure 1 shows the hypothesised relationships:

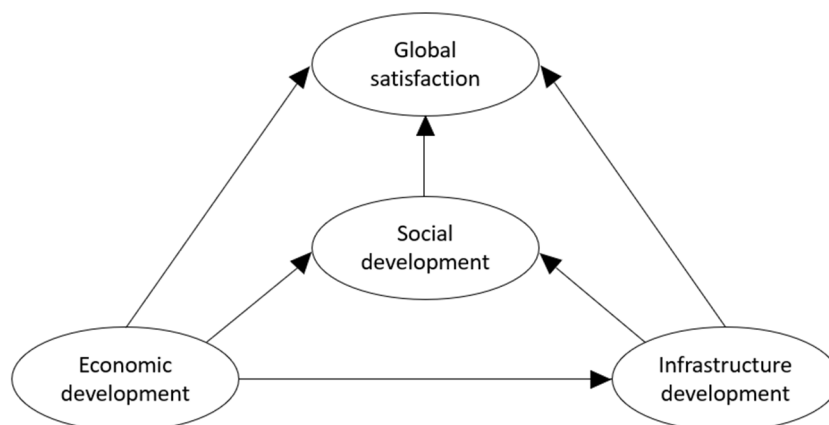


Figure 1. Relationships between constructs.

### 3. Materials and Methods

The study sample consists of 116 populations belonging to the 15 UNESCO Global Geoparks located in Spain. Table 1 shows the main characteristics of the sample used, as well as the response rate obtained in each geopark.

Table 1. Description of the Spanish Geoparks [74,75].

Geopark	Region	Hectares	Inhabitants	Municipalities	Response Rate
Cabo Gata-Níjar	Andalucía	12.600	767.716	3	66.67
Cataluña Central	Cataluña	125.000	194.681	36	27.78
Costa Vasca	País Vasco	1.800	20.880	3	66.67
El Hierro	Islas Canarias	26.800	11.147	3	33.33
Granada	Andalucía	472.200	97.195	47	46.81
Lanzarote	Islas Canarias	250.000	155.812	7	14.29
Las Loras	Castilla y León	96.000	18.820	16	43.75
Maestrazgo	Aragón	35.000	11.758	43	48.84
Molina-Alto Tajo	Castilla-La Mancha	430.000	8.403	77	12.99
Montañas do Courel	Galicia	57.800	5.107	3	100
Orígens	Cataluña	204.000	15.903	19	42.11
Sierra Norte Sevilla	Andalucía	47.300	24.790	10	40
Sierras Subbéticas	Andalucía	32.056	67.343	8	75
Sobrarbe-Pirineos	Aragón	220.200	7.490	19	36.84
Villuercas-Ibores-Jara	Extremadura	50.000	12.557	19	63.16
Total		2.060.756	1.419.602	313	37.06

Regarding data collection, a questionnaire used in previous studies [76] was sent by e-mail to the town councils of the 313 municipalities that make up the geoparks. The subjects to whom this questionnaire was addressed were the mayors of the municipalities in the sample with a dual role: those most responsible for local management and residents of the area.

Responses were collected between April and May 2022. In addition, the response rate was reinforced by telephone calls until an optimal sample size of more than 100 individuals was achieved to apply the study methodology [77]. Each of the indicators was rated according to a Likert scale with values ranging from 1 to 7.

Considering the study variables, the questionnaire used is composed of a set of questions that represent indicators associated with four dimensions or constructs, as can be seen in Table 2. Appendix A (Table A1) refers to the questions used segmented by the dimensions of the study.

**Table 2.** Latent variables and indicators.

Economic Development (ED)	Infrastructure Development (ID)	Social Development (SD)	Global Satisfaction (GS)
Level of wealth (ED1)	Travel infrastructure (ID1)	Maintenance of residents (SD1)	Opportunity awareness (GS1)
Tourism services (ED2)	ICT improvements (ID2)	Culture maintenance (SD2)	Expectations fulfilled (GS2)
Increase of visitors (ED3)	Resource efficiency (ID3)	Culture tourist attraction (SD3)	Proud to live there (GS3)
Increase in recreational use (ED4)	Signaling (ID4)	Tourism-residents conflicts (SD4)	Living traditions (GS4)
Tourism-primary sector conflicts (ED5)		Environmental awareness (SD5)	Improvement quality of life (GS5)
			Global satisfaction (GS6)

The technique used for data analysis was structural equation modelling, which determines the effects and relationships between constructs or latent variables, formed by a set of indicators [78]. The software used was SmartPLS 3. For the descriptive analysis, SPSS v25 was used.

As established in previous literature, the analysis was structured in two stages: in the first stage, the measurement model was analysed, while the second stage examined the structural model, which allows us to observe the relationships and corroborate the hypotheses put forward [78].

In addition, an importance-performance analysis (IPMA) was carried out at the indicator level. This analysis makes it possible to identify the importance and performance of the different items and to know which of them need to be addressed to improve a given objective construct. In summary, it is a two-dimensional graph, with the horizontal axis representing importance and the vertical axis representing performance [78–80].

#### 4. Results

##### 4.1. Analysis of the Structural Equation Model

First, Table 3 shows the mean and standard deviation for the indicators of each dimension analysed in this paper.

**Table 3.** Descriptive statistics and indicator loadings.

Dimension	Item	Mean	Desv.	Loading
ED	ED1	3.24	1.787	0.855
	ED2	3.55	1.876	0.917
	ED3	4.28	1.900	0.912
	ED4	4.01	1.909	0.915
	ED5	3.03	1.890	0.271
ID	ID1	3.16	1.789	0.791
	ID2	3.27	1.781	0.619
	ID3	3.49	1.707	0.816
	ID4	4.28	1.737	0.764
SD	SD1	4.22	2.035	0.548
	SD2	5.24	1.758	0.816
	SD3	4.65	1.953	0.877
	SD4	2.47	1.512	0.132
	SD5	4.23	1.706	0.789
GS	GS1	3.85	1.917	0.791
	GS2	3.13	1.518	0.843
	GS3	3.78	1.813	0.866
	GS4	3.32	1.806	0.836
	GS5	3.32	1.597	0.906
	GS6	4.25	1.673	0.890

According to the data provided in the table, the most positively rated indicator in terms of economic development was the increase in visitors (ED3), with an average score of 4.28 out of 7. At the other extreme, the indicator referring to the existence of conflicts



between tourism and the primary sector (ED5), with an average value of 3.03, was at the other end of the scale. Concerning the development of infrastructure, all the indicators reported a medium-low rating, except for signposting (ID4), which obtained a notably more positive rating (4.28). In social development, the indicator referring to the maintenance of culture stands out as the indicator with the highest average rating of all those used in this study, followed by the use of culture as a tourist attraction (SD3) (5.24 and 4.65, respectively). Conversely, the subjects reported little conflict between tourists and residents (SD4), reporting the lowest average rating of all the indicators (2.47). Finally, it is important to highlight a medium-high rating (4.25) of overall satisfaction with the geopark designation (SG6).

Starting with the first stage, the individual reliability at the indicator level is satisfactory. As can be seen in Table 3, in the first approach, some of the indicators did not meet the minimum threshold of 0.707 [81], so they were purged. As depicted in Figure 2, all the indicators that were retained either met the above requirement or were at values very close to or above 0.6 [82]. Continuing with the reliability of the constructs, Table 4 shows that Cronbach’s alpha values are above the commonly accepted value of 0.7 [83]. Furthermore, the composite reliability is sufficiently demonstrated, as the values of our analysis are within the threshold of 0.7 and 0.95 [78]. In addition, convergent validity is also satisfactory, with all values exceeding the lower limit of 0.5 [84].

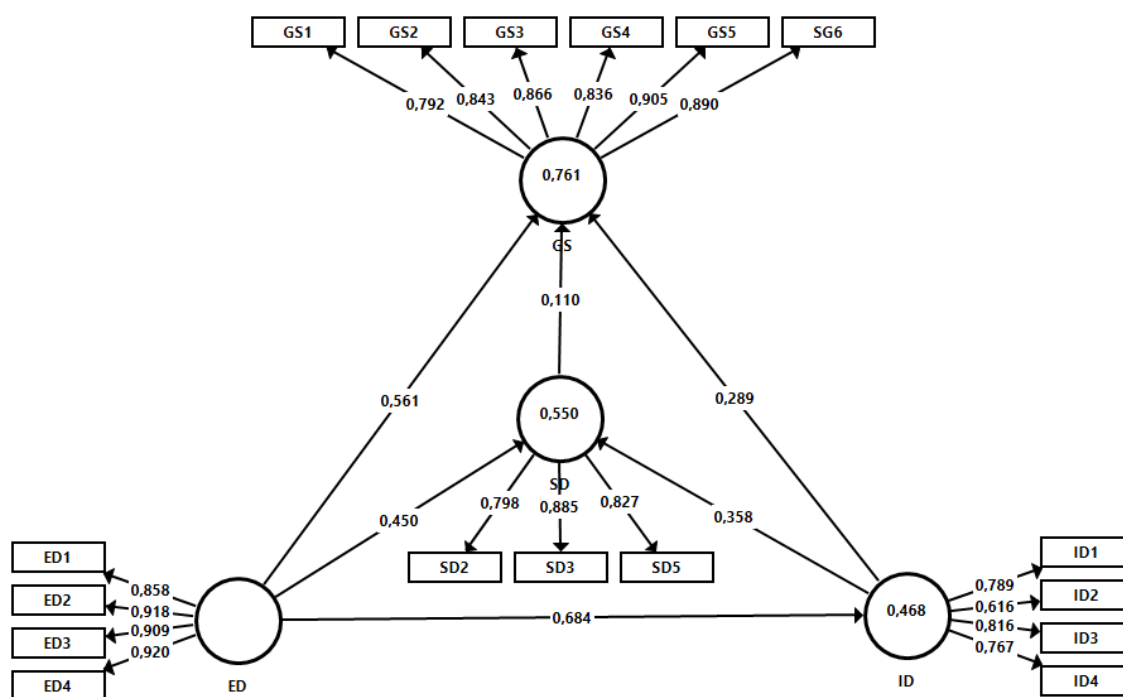


Figure 2. Estimation of the structural equation model.

Table 4. Reliability measures.

Constructs	AVE	Composite Reliability	R Square	Cronbach’s Alpha
ED	0.813	0.946		0.923
GS	0.733	0.943	0.761	0.927
ID	0.564	0.837	0.468	0.743
SD	0.702	0.876	0.550	0.791

In addition, it can be said that the latent variables enjoy moderate predictive power, as the values of the coefficients exceed the minimum suggested value of 0.1 [85]. In other words, the model can explain 46.8% of perceptions of infrastructure development, 55% of that for social development, and 76.1% of the overall satisfaction with the geopark designation.

Furthermore, as can be seen in Tables 5 and 6, the discriminant validity according to Fornell and Lacker's criterion and the Heterotrait–Monotrait relationship of the correlations (HTMT) is confirmed [86,87].

**Table 5.** Discriminant validity assessment by Fornell and Larcker's criterion.

	ED	GS	ID	SD
ED	0.902			
GS	0.835	0.856		
ID	0.684	0.746	0.751	
SD	0.695	0.692	0.665	0.838

**Table 6.** Discriminant validity assessment by the heterotrait–monotrait ratio (HTMT).

	ED	GS	ID	SD
ED				
GS	0.899			
ID	0.800	0.879		
SD	0.793	0.785	0.820	

According to Fornell and Lacker's criterion [86], for discriminant validity to exist, the square root of the AVE of each construct must be higher than its highest correlation with any other construct.

Moreover, according to the HTMT criterion, we can observe that all values are below the maximum accepted threshold of 0.85 or 0.90 [87].

Next, we proceed to determine whether or not the hypotheses raised in this research can be accepted by studying the structural model. Figure 2 shows the relationship coefficients between the hypothesised relationships.

The same data can be found in Table 7, which presents the results of the hypothesis test based on a bootstrap technique using 10,000 sub-samples.

**Table 7.** Hypotheses test.

Hypotheses	Direct Effects	Standard Errors	T Statistics
H1. ED -> GS	0.561	0.069	8.148 ***
H2. ED -> SD	0.450	0.086	5.231 ***
H3. SD -> GS	0.110	0.061	1.814 *
H4. ED -> ID	0.684	0.051	13.303 ***
H5. ID -> GS	0.289	0.073	3.984 ***
H6. ID -> SD	0.358	0.075	4.750 ***

Notes: Significance level: \*\*\*  $p$ -value < 0.01; \*  $p$ -value < 0.10.

The results reveal that all hypothesised relationships between constructs are significant at 1% ( $p$ -value < 0.01) except hypothesis 3, which is significant at 10% ( $p$ -value < 0.10). Specifically, economic development has a strong influence on the development of the surrounding infrastructure. On the other hand, social development is moderately conditioned (0.450) by economic development and, secondly, by the development of infrastructures (0.358). Finally, overall satisfaction with the geopark status in terms of sustainability is strongly related to economic development (0.561) and, to a lesser extent, is also influenced by infrastructure development (0.289) and social development (0.110).

#### 4.2. Importance–Performance Analysis (IPMA)

Once the relationships between constructs had been studied, a performance–importance map analysis (IPMA) was carried out to determine the importance and performance of the different indicators in the global satisfaction construct [78–80]. The results of this analysis are shown in Figure 3.

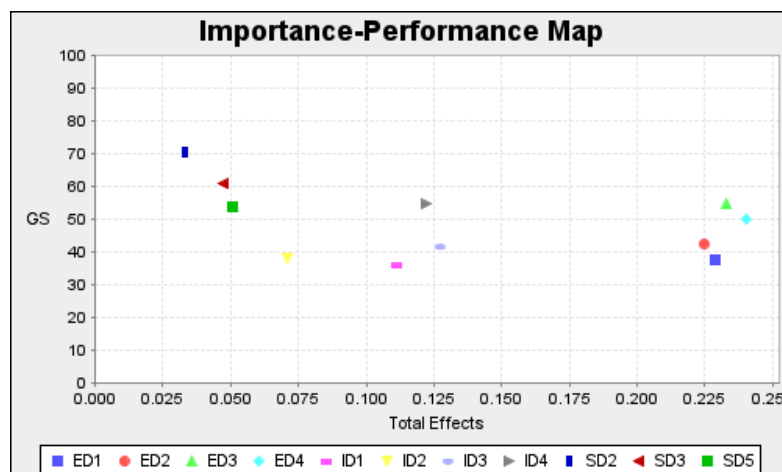


Figure 3. IPMA Diagram.

It can be seen from the diagram that the indicators are not particularly concentrated in any of the four quadrants of the map. Starting with the indicators with the best position, the increase in tourists (ED) and recreational use (ED4) in the geo-parks turn out to be the aspects that have the greatest influence on the perception of sustainability in these spaces. In particular, they have performances between 50–60%, so, although they are the best positioned indicators (in the upper right quadrant), indeed, they can still be considerably improved. Better management of these indicators would lead to a significant improvement in the perception of the sustainable development of geoparks.

The results of this analysis also support claims that the aspects related to the level of wealth of the local population (DE1) and tourism services (DE2), located in the lower right quadrant, play a key role in the overall satisfaction with the declaration of this type of site. However, they have a relatively low performance (around 40%), so an improvement in these would significantly improve local perceptions.

In other words, the indicators mentioned in the previous paragraphs are the aspects that should be further improved, since a better performance on these indicators can substantially improve the local perception of these sites in terms of sustainability.

Other indicators with considerable room for improvement are those related to movement (ID1), resource efficiency (ID3), and signage (ID4). These aspects are of medium importance and their performance can be substantially improved.

On the other hand, it is important to highlight how the indicator related to the maintenance of culture (SD2) has the highest performance of all the items studied (70%), while being at the same time the least important to the perception of local sustainability. The same occurs with the other indicators located in the upper left quadrant, referring to the exploitation of culture as a tourist attraction (SD3) and the environmental awareness of residents (SD5).

According to the above results, it is essential that the bodies responsible for the management of the Spanish Geoparks, as well as the tourism agents, focus on the aspects that have been identified as important and whose management is not being fully optimal.

## 5. Discussion and Conclusions

This paper aims to determine how different dimensions associated with rural development (economic, social, and infrastructural development) influence each other in terms of local perceptions of sustainability as a consequence of tourism in Spanish Geoparks.

In line with other research [18,19], we believe that knowing how residents perceive tourism activity in their environment is fundamental to the success of a tourist destination. This is even more relevant in this case, as geoparks are a figure whose aims include the sustainable development of the territory.

The findings of this study reveal that the economic development derived from tourism activity in Spanish Geoparks is the component most valued by the resident population in terms of the sustainability of their area of residence. This has been demonstrated in previous studies [67,88] which have confirmed that the socio-economic dimension is one of the aspects most valued by the local population, with other dimensions, such as infrastructure, being relegated to second place.

Moreover, residents value economic development much more highly than perceived social development in terms of maintaining the population and preserving and exploiting the area's cultural heritage as a tourist attraction. This difference is particularly striking since one of the objectives of the creation of geoparks is precisely the preservation of the cultural identity of the territory.

The results also demonstrate the relevance of tourism activity and, consequently, the economic development it generates to the perceived improvement of the environment in terms of travel infrastructure, signposting, communication technologies, and energy resource efficiency. Closely related to the above, this economic component also has a strong impact on the social development of the resident population in Spanish Geoparks.

On the other hand, from the IPMA analysis, it is possible to extract the points that need to be improved to achieve greater sustainable development in these areas. In general, these aspects can be summarised as the need to boost tourism development in terms of attracting tourists, increasing recreational use, and establishing new tourist services in these areas. Similarly, the results call for investment in educational programs to disseminate knowledge about the geological, natural, and cultural heritage of these territories.

Spain enjoys a great competitive advantage in tourism. In the case in point, its incalculable ecological value, the grandeur of its landscapes, and its wide biodiversity, among other aspects, are outstanding. Thus, given the particularities of the geoparks, from a natural and cultural point of view, as well as the extremely rural characteristics of the municipalities that make them up, it is essential to design tourism that respects the natural resources and the traditions and culture of the residents. In this way, an optimal development of these areas for tourism would be achieved, which would be essential for their regional economic and social development. This new type of tourist destination could be a great alternative to the traditional sun and beach tourism, which also has an important comparative advantage and the extra benefit of not being associated with seasonal tourism during the summer period.

It is also worth highlighting the importance of these areas in the Spanish territory, which has numerous categories of protection with notable limitations on public and tourist use due to the legal regime, geoparks being one of the most flexible in this respect. This makes these areas an excellent option for tourism development since their legal configuration allows for greater recreational use and greater development of local businesses.

On the other hand, we encourage geopark management bodies, local public institutions, and regional governments to further integrate the local population in the tourism development of these unique destinations, as their concerns and interests need to be addressed to achieve optimal sustainable development.

Concerning the future prospects of geoparks and geotourism in Spain, it is worth highlighting the great interest that is being generated among researchers and society in general. Proof of this is that there are currently various proposals for the creation of new geoparks, such as Costa Quebrada in the region of Cantabria, Cabo Ortegal in Galicia, or Altos del Guadalorce in Malaga, which augurs a promising future for the development of tourism in this type of area.

Finally, the main limitation to be considered in this work is the difficulty of identifying the municipalities that make up the 15 Spanish Geoparks, as there is no official directory in which this information is collected. Related to the above, in some cases, we encountered the problem that some of the municipalities were not considered part of the geopark, even though they were, which demonstrates the need to intensify the relationship between the geopark management bodies and the local authorities. Furthermore, another limitation

encountered was the difficulty in collecting data, as in many cases it was impossible to contact the very sparsely populated towns.

In future work, a comparison could be made with a selection of control municipalities located further away from the geoparks under consideration to observe differences in perceived regional development. In addition, it would also be interesting to include new indicators in the study constructs to provide a more integrative view, or to carry out a study comparing geoparks in different countries given their management at the regional level.

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## Appendix A

**Table A1.** Questionnaire. Item blocks.

Perception of Economic Development (ED)
ED1. The level of wealth of the village, in general, has increased since the declaration of the geopark.
ED2. The village has a greater number of tourism-related services (directly or indirectly).
ED3. The number of tourists in your area has increased.
ED4. The municipality has increased its recreational use and has more tourist activities.
ED5. There are conflicts between tourism and the exploitation of activities related to agriculture and livestock, mineral extraction, etc. (primary sector).
Perception of Infrastructures Development (ID)
ID1. The subsidies received have led to an improvement in the area of residence in terms of infrastructure for traveling to the area.
ID2. Improvements in communication technologies are noticeable, with increased mobile phone coverage and data transmission capacity.
ID3. Since the declaration of the geopark, resource efficiency has been improved. For example, promoting the use of renewable energy systems to save water consumption.
ID4. The grants received have improved the environment in terms of signage.
Perception of Social Development (SD)
SD1. The number of residents in the village has been maintained.
SD2. Local culture and traditions have been preserved.
SD3. The culture and traditions of your village are exploited as a tourist attraction.
SD4. Conflicts have arisen between tourism and residents (noise, waste, etc.).
SD5. Neighbours are more environmentally friendly.
Perception of Global Satisfaction (GS)
GS1. Residents are more aware of the opportunity the locality has to be in the geopark's zone of influence.
GS2. The expectations generated by the economic and social opportunities of being within a geopark have been fulfilled.
GS3. The geopark has made the residents of this locality proud to live in this community and not in another one.
GS4. The geopark has kept local customs and traditions alive.
GS5. You have improved the quality of life of the inhabitants of your municipality.
GS6. Please rate your overall satisfaction with the geopark designation, in terms of the economic impact it has had on your village.

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# **RESUMEN GLOBAL DE LOS RESULTADOS Y DISCUSIÓN**



## **Resumen global de los resultados y discusión**

A continuación, se presenta un resumen que integra los principales resultados obtenidos en los tres artículos que conforman la presente tesis doctoral a través de diferentes análisis metodológicos.

En primer lugar, los resultados del primero de los artículos señalan que la satisfacción global tras la declaración de parque nacional por los máximos gestores políticos de los municipios cercanos alcanza una valoración media de 3,60 sobre 7. Por su parte, situándonos en el tercer artículo, si nos fijamos en este mismo indicador en otra figura de protección caracterizada por una mayor flexibilidad en cuanto a las limitaciones al uso público, como son los geoparques, esta valoración media es considerablemente mayor, alcanzando una puntuación de 4,25. Esta diferencia entre ambos tipos de figuras ya nos ofrece una primera visión general de cómo afecta el tipo de figura de protección en la percepción local en cuanto a la sostenibilidad se refiere. En base a ello, se puede determinar que unas restricciones muy estrictas al uso tradicional de la tierra y a determinadas actividades socioeconómicas repercute seriamente en la percepción de la población local y, consecuentemente, en la gestión turística de este tipo de espacios.

En segundo lugar, es importante subrayar que, de acuerdo con el modelo de ecuaciones estructurales planteado, esta satisfacción general con la declaración de parque nacional se encuentra fuertemente influida por el desarrollo económico percibido. Del mismo modo, esta sólida relación puede ser extensible a otro tipo de enclaves naturales, puesto que también resulta patente en otros entornos como se manifiesta en el estudio realizado en los geoparques españoles. Como se menciona en los artículos que sustentan esta tesis doctoral, estos resultados concuerdan con numerosos estudios previos en los que se determina que las percepciones y actitudes de la población residente dependen, en gran medida, de los beneficios económicos derivados de la actividad turística (Gursoy et al., 2002; Gursoy y Rutherford, 2004; Liasidou et al., 2021; Nunkoo y Ramkissoon, 2011; Rasoolimanesh et al., 2015).

Asimismo, y muy relacionado con lo citado anteriormente, en el caso de los parques nacionales es también realmente importante el peso que ejerce la calidad de vida de la población local en la satisfacción general con la sostenibilidad de estos espacios,

entendida esta como una mejora de las infraestructuras de transporte, de comunicación o eficiencia de recursos, entre otros aspectos.

Para entender este componente económico tan notablemente importante en la sostenibilidad de los parques nacionales, es imprescindible hacer referencia a las empresas locales relacionadas con el turismo de naturaleza, en particular, y el sector servicios, en general. Por ello, en el segundo artículo científico se llevó a cabo un análisis económico-financiero del tejido empresarial existente en los municipios cercanos a los parques nacionales peninsulares. De este estudio se extrajo, en primer lugar, la existencia de una gran disparidad en cuanto a las características de las empresas, con una gran diferencia entre los valores, máximos y mínimos de los ingresos de explotación y rentabilidad económica.

Asimismo, los resultados de este estudio brindan una visión de cuáles son algunos de los aspectos determinantes a la hora de pertenecer a los municipios con mejores cifras de desarrollo empresarial. Concretamente, el análisis de conglomerados y logit llevados a cabo denotan la importancia de la accesibilidad de los medios de transporte en términos de cercanía a las infraestructuras ferroviarias. Del mismo modo, y tal como se ha explicado anteriormente, conviene de nuevo resaltar la importancia que posee la percepción de los residentes en cuanto al desarrollo económico, resultando este aspecto un relevante indicador para tener en cuenta en el desarrollo empresarial de los municipios que se sitúan en las zonas de influencia socioeconómica de los parques nacionales españoles.

Finalmente, los resultados del análisis importancia-rendimiento del tercer estudio ofrecen un indicio de cómo puede ser mejorada la percepción global de la población residente con la declaración de un área protegida. En concreto, este estudio se centraba en la Red de Geoparques Mundiales de la Unesco, sin embargo, consideramos que pueden ser extendidos a otras áreas naturales, como pueden ser los parques nacionales u otras figuras afines. De conformidad con los resultados, los aspectos relacionados con el aumento del uso recreativo del entorno, el incremento de los turistas y visitantes, el aumento de la riqueza local y de los servicios turísticos son los que más preponderancia poseen en la satisfacción general con la declaración de la figura de protección. De este modo, se puede observar cómo el componente económico vuelve a ganar protagonismo en la sostenibilidad percibida de las áreas protegidas. Particularmente, a pesar de que se

trata de indicadores que poseen una de las posiciones mejor situadas en el análisis propuesto, es cierto que su gestión puede ser mejorada, de tal forma que una mejora de esta repercutiría de forma exponencial en una mejor percepción de la población local, siendo este uno de los principales factores del éxito del desarrollo sostenible de las áreas protegidas.

Para finalizar esta sección, se resumirán las respuestas a cada uno de los objetivos que fueron propuestos al inicio de la presente tesis doctoral y en cada uno de los artículos que la componen:

En primer lugar, la satisfacción global con la declaración de parque nacional, como la figura más restrictiva del ordenamiento jurídico español, y su sostenibilidad, alcanza una valoración media por parte de una de las principales partes interesadas en la gestión turística de estos espacios, a saber, los gestores políticos de los municipios que más afectados se encuentran por tal designación. El desarrollo económico se posiciona como el primer factor que influye en el desarrollo sostenible percibido, seguido de la calidad de vida de la población local y, en menor medida, el desarrollo social de la comunidad residente.

En segundo lugar, en cuanto a los principales aspectos determinantes en el desarrollo empresarial de los municipios afectados por la declaración de parque nacional, destacan especialmente las infraestructuras relacionadas con la accesibilidad de los medios de transporte, concretamente el ferroviario, y la percepción local sobre el desarrollo económico percibido.

En tercer lugar, aludiendo a los geoparques, otra figura regulada por la Ley 42/2007 del Patrimonio Natural y de la Biodiversidad, caracterizada por una mayor flexibilidad en la gestión de su uso público, la satisfacción general y el desarrollo rural percibido por los gestores municipales de las localidades que los conforman alcanza una valoración media considerablemente más alta en comparación con los parques nacionales. Esta satisfacción general con la declaración de geoparque se encuentra condicionada, en primer lugar, por el desarrollo económico percibido, seguido del desarrollo de las infraestructuras y el desarrollo social de la población. Por tanto, observando el orden de prelación, se vuelve a remarcar la importancia del desarrollo económico en el panorama de estudio.

En resumen, atendiendo a la percepción local, uno de los factores más esenciales en la gestión de las áreas protegidas, el desarrollo económico derivado del turismo como consecuencia de la declaración de espacio protegido es un aspecto fundamental para entender el desarrollo sostenible de estos entornos.

## **CONCLUSIONES**





## Conclusiones

Así pues, una vez expuestos los principales resultados obtenidos y la discusión que conllevan, es el momento de hacer una valoración de la contribución que esta tesis doctoral puede suponer, no solo a la literatura científica, sino también a la sociedad en cuanto a sus implicaciones prácticas se refiere, dado el creciente interés y la actual y progresiva tendencia de las áreas naturales protegidas y el turismo sostenible, que no es otra cosa que una imperante necesidad en la actualidad. De este modo, mencionando las palabras de Francisco Contreras, director del Parador Nacional de El Saler, situado en las inmediaciones del Parque Natural de la Albufera, “el futuro del turismo será sostenible o no será” (Contreras-Alvarado, 2019). Estas palabras nos hacen entender la gran magnitud del tema que se aborda en esta investigación.

En primer lugar, haciendo una vez más un resumen del desafío que suponen las áreas naturales protegidas, y en concordancia con numerosos estudios existentes en la literatura previa, podemos concluir que la declaración de parques nacionales tiene efectos tanto positivos, como negativos en sus zonas de influencia socioeconómica. Las externalidades positivas se encuentran relacionadas, principalmente, con la potenciación del atractivo de este tipo de destinos y, consecuentemente, un mayor crecimiento del desarrollo socioeconómico derivado del turismo. Mientras que, en el extremo opuesto, se encuentran todas las consecuencias socioeconómicas derivadas de las limitaciones y restricciones legales al uso público y las externalidades negativas asociadas a la actividad turística.

En este sentido, desde la perspectiva de la gestión de los parques nacionales, es sumamente necesario considerar los beneficios e inconvenientes de las restricciones al uso público para mantener la conservación de los recursos naturales, en tanto que unas limitaciones excesivas pueden ir en detrimento del desarrollo regional que, no olvidemos, es otro de los objetivos que se marcan en la declaración de este tipo de espacios. No obstante, siendo consciente de la misión primordial de los parques nacionales, dadas sus características intrínsecas y la escasa alteración de sus paisajes por parte del ser humano, nunca se debe priorizar este desarrollo socioeconómico sobre el objetivo de conservación, puesto que, de este modo, estos espacios perderían su esencia.

Sin embargo, sí que sería necesario abogar por un equilibrio entre las dimensiones biológica, económica y social, puesto que, de lo contrario, asistiríamos a un panorama desolador en el que imperaría el subdesarrollo socioeconómico, la despoblación y todas las consecuencias que ello conlleva en la actualidad. Esta conjugación permitirá mantener vivas tradiciones locales y los usos tradicionales de la tierra, lo cual, además de redundar en una mejora de la calidad de vida de la población, también supone un excelente atractivo turístico, catalizador de un desarrollo económico y social regional. Es necesario considerar que, al fin y al cabo, los parques nacionales son el resultado del uso tradicional de la tierra durante siglos. Así pues, ello debería continuar siendo así, sin que pueda entenderse esto como una licencia que menoscabe la conservación de los recursos naturales.

Del mismo modo, las corporaciones locales deben involucrarse en la gestión de los parques nacionales, pues se trata del primer eslabón político en la toma de decisiones de las zonas de influencia socioeconómica. En particular, pueden promocionar el turismo local a través de diferentes incentivos a las empresas turísticas. Asimismo, pueden desarrollar diferentes programas que mejoren la empleabilidad, formación, educación y concienciación ambiental de los residentes y empresarios locales para que sean conscientes de la oportunidad que supone vivir y ofrecer sus servicios en las inmediaciones de estos privilegiados entornos naturales.

En otras palabras, las políticas de gestión de los parques nacionales y las áreas naturales protegidas en general, deben apostar no solo por la conservación de los recursos naturales, sino que también deben poner en valor otros aspectos sociales destacados de estos enclaves a través de una promoción de actividades de recreo y turísticas sostenibles, respetuosas con el medio natural y acordes a la capacidad de carga de los mismos, puesto que ello redundará en interesantes oportunidades para las empresas locales de la zona. En definitiva, se trata de entender el potencial valor que pueden ofrecer los espacios naturales protegidos desde diferentes perspectivas.

Es decir, las políticas económicas, sociales y de conservación deben converger en el modelo de gestión de los parques nacionales. Entender el entorno natural como un motor de desarrollo económico puede suscitar cierto debate y contradicción entre los postulados casi exclusivamente conservacionistas y aquellos que abogan por el desarrollo turístico. Sin embargo, una combinación de ambos y un equilibrio entre el desarrollo

socioeconómico y la conservación es posible y puede ser la única forma de lograr la resiliencia de las áreas naturales protegidas.

En cuanto a la instauración de políticas de gestión de estos espacios naturales, es fundamental que los residentes participen de forma activa en la toma de decisiones, pues son los principales afectados por las limitaciones que pueden originarse. Los representantes de las poblaciones en la zona de influencia de los entornos protegidos deben tener mucho más en cuenta las aportaciones, opiniones, sugerencias o quejas de los residentes a los que representa en los patronatos o unidades de gestión del área natural protegida. También, dado que su papel es crucial para lograr un exitoso desarrollo turístico sostenible, es importante que en este tipo de entornos se ofrezcan las infraestructuras básicas y turísticas que proporcionen un estándar de calidad de vida para sus habitantes.

Además de lo citado anteriormente, es imprescindible que todos los agentes turísticos implicados en este tipo de turismo llevado a cabo en los parques nacionales y otros entornos protegidos se comprometan firmemente a cumplir con la normativa medioambiental, de tal forma que no se prepondere el desarrollo económico sobre la preservación de los recursos naturales, dadas las singularidades ecológicas y paisajísticas de estos enclaves. Se trata, pues, de planificar y gestionar un turismo regulado y acorde a las características naturales intrínsecas de este tipo de destinos, puesto que de lo contrario se pondría en riesgo la esencia de la declaración de este tipo de figuras. En este sentido, es conveniente mencionar la Carta Europea de Turismo Sostenible, como una herramienta de referencia para lograr una planificación turística sostenible en los espacios naturales protegidos a través del compromiso y participación las partes implicadas. Sin embargo, la voluntariedad de la que gozan los espacios naturales protegidos para adherirse a ella ha provocado que esta iniciativa no cuente con suficiente éxito. Ello nos lleva a plantearnos si, quizá, sería necesaria su implantación obligatoria, así como la instauración de sanciones en materia de subvenciones en caso de incumplimiento.

A pesar del creciente interés que demuestran los numerosos estudios científicos e investigaciones sobre el turismo sostenible en los parques nacionales en la literatura previa, aún queda mucho camino por recorrer, especialmente en cuanto a la aplicación de medidas tangibles en la dimensión práctica. En este sentido, a pesar de la contribución de

esta tesis doctoral, esta obra no está desprovista de limitaciones. Por mencionar algunas de ellas, se exponen algunas consideraciones en base a los resultados obtenidos.

Primeramente, los estudios que componen la tesis doctoral ofrecen un profundo conocimiento sobre la percepción de los alcaldes de los municipios más inmediatos a los parques nacionales y geoparques, desde una doble perspectiva, a saber, como máximos gestores políticos municipales, por un lado; y como población residente, por otro. Sin embargo, es cierto que no se ha realizado un análisis de la percepción de otras partes interesadas que incrementarían el valor de esta investigación, como son los empresarios locales, los turistas o la población local como tal. Para abordar esta deficiencia, futuras investigaciones podrían centrarse en analizar estos otros stakeholders, implicados y afectados por la gestión del entorno protegido.

Del mismo modo, y respecto a la metodología empleada, en futuros estudios los análisis llevados a cabo podrían ser complementados por una dimensión cualitativa, a través de entrevistas individualizadas a la población encuestada, acrecentando ello considerablemente el valor de la investigación.

Asimismo, a lo largo de esta tesis doctoral se ha examinado el desarrollo del uso público y desarrollo sostenible de los parques nacionales a nivel de Red de Parques Nacionales en todo el territorio español, sin detenernos en realizar un análisis que agrupe el comportamiento de estos espacios protegidos en función de algunas características que permitan realizar esta segmentación, por ejemplo, la ubicación geográfica, cercanía de otros destinos turísticos (sol y playa o monumental), sus valores paisajísticos o ecológicos, la densidad de su población, etc. La realización de un estudio que superase esta limitación proporcionaría información de gran interés.

Por último, y como ya se ha expuesto en algunos de los trabajos que componen esta obra, la principal dificultad que nos hemos encontrado se centra en la accesibilidad de los datos. Es decir, al trabajar a escala municipal, ha resultado complejo encontrar datos socioeconómicos, empresariales, ecológicos o medioambientales a un nivel tan desagregado, lo cual nos ha obligado a descartar numerosos proyectos, a nuestro juicio, muy interesantes y enriquecedores en el estudio de esta temática. Así pues, en algunos casos, los datos carecían de tendencia histórica, en otras ocasiones no se encontraban actualizados o, en el peor de los casos, ni siquiera existían.

Todas estas limitaciones brindan paso a nuevas investigaciones que, sin lugar a duda, se tendrán en consideración en trabajos futuros, ya que como se ha mencionado anteriormente, el futuro del turismo no es otro que el de la sostenibilidad.



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