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Tese de doutoramento

Analysis of Methodologies for the
Evaluation of UNESCO's international
programs Biosphere reserves and world
Geoparks: A comparative study between
Spain and Morocco

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TESIS DOCTORAL

**ANALYSIS OF METHODOLOGIES FOR
THE EVALUATION OF UNESCO'S
INTERNATIONAL PROGRAMS
BIOSPHERE RESERVES AND WORLD
GEOPARKS: A COMPARATIVE STUDY
BETWEEN SPAIN AND MOROCCO**

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**PROGRAMA DE DOUTORAMENTO EN BIODIVERSIDADE E
CONSERVACION DO MEDIO NATURAL**

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Resumen extendido

La preservación del patrimonio natural y cultural se ha convertido en uno de los desafíos globales más importantes del siglo XXI. Frente a una degradación ambiental sin precedentes, una pérdida de biodiversidad y las presiones de la globalización, las naciones de todo el mundo se esfuerzan por equilibrar la conservación del patrimonio con el desarrollo socioeconómico. Los marcos de la UNESCO, incluidas las Reservas de la Biosfera y los Geoparques Mundiales, se han vuelto fundamentales para abordar estos desafíos. Estas designaciones no sólo protegen importantes sitios ecológicos, geológicos y culturales, sino que también sirven como catalizadores para la educación, la investigación científica y el turismo sostenible. Al promover un enfoque holístico que integra la conservación con el desarrollo humano, las iniciativas de la UNESCO se alinean con los objetivos más amplios de la Agenda 2030 para el Desarrollo Sostenible.

Marruecos, con su rica biodiversidad, diversos ecosistemas y formaciones geológicas únicas, está en una posición única para beneficiarse de estos marcos. Sin embargo, el país enfrenta desafíos significativos para lograr el reconocimiento de la UNESCO, como lo demuestra el número limitado de sitios designados en comparación con los países mediterráneos vecinos como España. El contraste entre ambos países no se atribuye a una relación causal, sino más bien al resultado de diferentes trayectorias históricas, institucionales y gubernamentales que moldearon el desarrollo de su patrimonio. Si bien Marruecos cuenta con un patrimonio cultural y natural excepcional, la disparidad en las designaciones de la UNESCO refleja barreras subyacentes de gobernanza, financieras y sociopolíticas que obstaculizan la gestión y el reconocimiento efectivos de los sitios.

Este estudio aborda dos aspectos críticos de la gestión del patrimonio en Marruecos. El primero es una exploración de los desafíos sistémicos que contribuyen a la

subrepresentación de Marruecos en las designaciones de la UNESCO, en particular en comparación con España, que ha aprovechado con éxito sus activos naturales y culturales para lograr el reconocimiento internacional. El segundo aspecto se centra en una propuesta con visión de futuro para el desarrollo de un geoparque en la región del Rif, un área de inmensa importancia ecológica y geológica. Esta iniciativa tiene como objetivo abordar las brechas geográficas y temáticas de Marruecos en el reconocimiento del patrimonio y al mismo tiempo fomentar el desarrollo sostenible en una de sus regiones con mayor biodiversidad.

Al examinar estas cuestiones, esta investigación busca contribuir al discurso más amplio sobre la conservación del patrimonio y el desarrollo sostenible. Destaca la importancia de la reforma de la gobernanza, la participación de la comunidad y las estrategias de conservación innovadoras para lograr el reconocimiento internacional y garantizar la preservación a largo plazo de los activos naturales y culturales. A través de un análisis comparativo de Marruecos y España, el estudio proporciona conocimientos prácticos que pueden informar las políticas nacionales y regionales, mientras que el Geoparque del Rif propuesto sirve como modelo para integrar la biodiversidad y la geodiversidad en un marco de conservación cohesivo.

En las secciones siguientes, este resumen ampliado profundiza en los antecedentes, hipótesis, objetivos, metodologías, hallazgos y contribuciones del estudio, ofreciendo una visión integral de su alcance e importancia.

Palabras clave: Programas de la UNESCO, Geoparque, Reserva de la Biosfera, Marruecos, España, Geoturismo, Desarrollo Sostenible.

Antecedentes

La protección y el desarrollo sostenible del patrimonio natural y cultural han surgido como prioridades globales críticas frente a la creciente degradación ambiental, el cambio climático y la rápida urbanización. Las Reservas de Biosfera y los Geoparques Mundiales de la UNESCO son marcos reconocidos internacionalmente que tienen como objetivo conservar la biodiversidad, promover el uso sostenible de los recursos naturales y mejorar las condiciones socioeconómicas locales. Las Reservas de la Biosfera hacen hincapié en la preservación de los ecosistemas y las interacciones entre los seres

humanos y la naturaleza, mientras que los Geoparques se centran en la protección y la promoción del patrimonio geológico. Juntos, contribuyen significativamente a los objetivos de desarrollo sostenible fomentando la educación, el turismo y la participación comunitaria.

Marruecos, con su biodiversidad y geodiversidad excepcionales, tiene un inmenso potencial para el reconocimiento de la UNESCO. Sin embargo, el país sigue estando significativamente subrepresentado en las designaciones de la UNESCO en comparación con los países mediterráneos vecinos como España. Mientras que Marruecos tiene un geoparque (M'goun) y una Reserva de la Biosfera Intercontinental del Mediterráneo en el norte, España ha logrado una red más extensa de sitios UNESCO, que incluyen numerosas reservas de la biosfera y geoparques. Esta disparidad plantea preguntas sobre los factores que influyen en el reconocimiento y la gestión del patrimonio en estos dos países. La región del Rif, en el norte de Marruecos, con sus características ecológicas y geológicas únicas, presenta una oportunidad para abordar este desequilibrio mediante el desarrollo de un geoparque que complemente las reservas de biosfera existentes y mejore el desarrollo sostenible en la zona.

Hipótesis

Este estudio plantea la hipótesis de que las estructuras de gobernanza, los mecanismos de financiación, la participación de la comunidad y las estrategias de turismo sostenible son factores fundamentales que influyen en la disparidad en las designaciones de la UNESCO entre Marruecos y España. Además, plantea la hipótesis de que el establecimiento de un geoparque en la región del Rif puede servir como modelo para equilibrar la conservación del patrimonio y el desarrollo socioeconómico, abordando las brechas geográficas y temáticas en la representación del patrimonio de Marruecos.

Objetivos

La investigación se basa en dos objetivos principales:

1. Explorar y analizar los desafíos sistémicos que contribuyen a los limitados reconocimientos de la UNESCO a Marruecos a través de un estudio comparativo con España.

2. Proponer un marco detallado para el desarrollo de un geoparque en la región del Rif, enfatizando la integración de la geodiversidad y la conservación de la biodiversidad con el desarrollo sostenible basado en la comunidad.

Los objetivos secundarios incluyen: • Examinar el papel de los factores históricos, políticos y socioeconómicos en la configuración de las prácticas de gestión del patrimonio de ambos países.

- Investigar las barreras de gobernanza, políticas y financieras que obstaculizan la capacidad de Marruecos para obtener más reconocimientos de la UNESCO.

- Evaluar los beneficios socioeconómicos y ambientales potenciales de establecer un geoparque en la región del Rif.

Metodología

El estudio emplea un enfoque multimétodo que combina métodos de investigación cualitativos y comparativos para lograr sus objetivos. Las metodologías clave incluyen:

1. Entrevistas a las partes interesadas: o Se realizaron entrevistas con responsables de políticas, expertos en patrimonio y miembros de la comunidad local en Marruecos y España para comprender sus percepciones de las designaciones de la UNESCO y las prácticas de gestión de sitios.

- Las preguntas se centraron en la gobernanza, la financiación, la participación comunitaria y el impacto socioeconómico de los sitios de la UNESCO.

2. Análisis de archivos y documentos de políticas:

- Se analizaron archivos históricos, marcos de políticas y archivos de nominaciones de la UNESCO para rastrear la evolución de las prácticas de conservación del patrimonio en ambos países.

- El análisis se centró en identificar modelos de gobernanza clave, marcos legislativos y mecanismos institucionales que influyen en el reconocimiento de los sitios patrimoniales.

3. Evaluaciones de campo:

- Se realizaron evaluaciones in situ en los sitios de la UNESCO existentes y potenciales de Marruecos, y También en otras regiones dentro del Rif.

- Las observaciones se centraron en la condición física de los sitios, las medidas de conservación y el nivel de participación comunitaria.

4. Análisis comparativo:

- Se realizó una comparación sistemática de Marruecos y España en múltiples dimensiones, incluida la gobernanza, la financiación, la participación comunitaria y las estrategias de turismo sostenible.

- Se exploraron temas como la descentralización, la colaboración de las partes interesadas y las asociaciones internacionales.

5. Marco de Desarrollo del Geoparque:

- Se desarrolló un marco conceptual para el establecimiento de un geoparque en la región del Rif basándose en las mejores prácticas de los sitios existentes de la UNESCO y en las aportaciones de las partes interesadas.

Resultados

Los resultados del estudio revelan información fundamental sobre la disparidad en las designaciones de la UNESCO y el potencial de desarrollo de geoparques en Marruecos:

1. Gobernanza y marcos de políticas:

- El modelo de gobernanza centralizada de Marruecos limita la participación de las autoridades locales y las comunidades en la gestión de los sitios patrimoniales, lo que genera ineficiencias burocráticas y obstaculiza el desarrollo de estrategias de conservación sólidas.

- La estructura de gobernanza descentralizada de España, que empodera a las autoridades regionales y locales, facilita una gestión eficaz del patrimonio y ha contribuido significativamente a su éxito en las designaciones de la UNESCO.

2. Mecanismos de financiación:

- Marruecos se enfrenta a importantes limitaciones financieras en la conservación del patrimonio, ya que depende en gran medida de la financiación gubernamental con un acceso limitado a subvenciones internacionales o inversiones privadas.

- España se beneficia de fuentes de financiación diversificadas, incluidos programas de la UE, asociaciones público-privadas e ingresos turísticos, lo que garantiza la sostenibilidad financiera de sus sitios UNESCO.

3. Participación de la comunidad:

- La limitada conciencia y participación de la comunidad en Marruecos socava los esfuerzos de conservación y reduce los beneficios socioeconómicos del reconocimiento

del patrimonio.

- Por el contrario, España involucra activamente a las comunidades locales en la gestión del sitio y los procesos de toma de decisiones, fomentando un sentido de propiedad y participación.

4. Turismo y desarrollo sostenible:

- La infraestructura turística subdesarrollada de Marruecos y la falta de estrategias de turismo sostenible limitan el potencial de sus sitios patrimoniales para impulsar el crecimiento económico local.

- España ha integrado con éxito el turismo sostenible con la conservación del patrimonio, aprovechando sus sitios de la UNESCO como atracciones clave para los visitantes internacionales.

5. Potencial de desarrollo del geoparque:

- La región del Rif, con su rica biodiversidad y geodiversidad, es ideal para la creación de un geoparque.

- El geoparque propuesto podría mejorar el reconocimiento internacional de la región, promover el turismo sostenible y brindar oportunidades educativas y de investigación.

Contribución

Este estudio realiza varias contribuciones significativas al campo de la gestión del patrimonio y el desarrollo sostenible:

1. Perspectivas comparativas:

- El estudio proporciona un análisis comparativo detallado de Marruecos y España, destacando las mejores prácticas en gobernanza, financiación y participación comunitaria que pueden informar las estrategias de gestión del patrimonio de Marruecos.

2. Propuesta de Geoparque:

- El marco propuesto para un geoparque en la región del Rif ofrece una solución práctica para abordar la disparidad en el reconocimiento del patrimonio de Marruecos y al mismo tiempo promover la conservación y el desarrollo socioeconómico.

3. Recomendaciones de políticas:

- La investigación identifica reformas clave de políticas y gobernanza necesarias para fortalecer el marco de gestión del patrimonio de Marruecos, incluida la descentralización, el desarrollo de capacidades para las autoridades locales y el desarrollo de mecanismos de financiación innovadores.

4. Contribución Académica:

- Al integrar la biodiversidad y la geodiversidad dentro de un marco de conservación único, el estudio avanza en la comprensión de enfoques holísticos para la gestión del patrimonio.

Las principales contribuciones de esta Tesis se describen en los siguientes dos capítulos:

En el capítulo 4, presentamos las metodologías y describimos las técnicas cualitativas utilizadas para recopilar información detallada sobre las variables que afectan las iniciativas de conservación del patrimonio en ambos países. Estas técnicas incluyeron análisis de documentos, evaluaciones de campo y entrevistas. Utilizando una metodología analítica comparativa, el estudio busca sintetizar los conocimientos extraídos de archivos históricos, documentos de políticas, opiniones de las partes interesadas y observaciones directas para proporcionar una comprensión detallada de la dinámica subyacente que impulsa el reconocimiento de la UNESCO. Además de asegurar la validez y confiabilidad de los resultados, este rigor metodológico posiciona la investigación para brindar sugerencias útiles para mejorar las técnicas de conservación del patrimonio.

En el capítulo 5, Resultados y Discusión, se presentan los hallazgos de un estudio comparativo entre sitios designados por la UNESCO en Marruecos y España, mediante un análisis integrado que combina datos cuantitativos, registros históricos, documentos de política y entrevistas con actores clave. Esta metodología permite examinar las disparidades en la designación de sitios, los modelos de gestión y el nivel de participación comunitaria. En lugar de separar los resultados de la interpretación, el capítulo los entrelaza para ofrecer una comprensión más profunda y coherente de los factores que influyen en el reconocimiento patrimonial y la eficacia de su conservación. Los resultados muestran diferencias notables en la superficie, gestión y organización de las Reservas y Geoparques entre ambos países.

En España, la gestión recae principalmente en las Comunidades Autónomas o entidades públicas y privadas (como consorcios, fundaciones o asociaciones), mientras

que en Marruecos es gestionada de forma centralizada por el gobierno. Las Reservas Españolas están coordinadas a través de la Red Española de Reservas de Biosfera y del Comité Español del programa MaB de la UNESCO, con el respaldo de consejos científicos y gestores. Además, algunas comunidades autónomas cuentan con redes propias, como la Red Gallega y la Red Andaluza. Por su parte, los geoparques en España son gestionados por un Comité de Coordinación con representación de cada geoparque y de la UNESCO.

En contraste, Marruecos presenta una estructura centralizada que, si bien agiliza algunos procedimientos, puede limitar la participación de actores locales y reducir la flexibilidad en la gestión adaptativa de los sitios.

En la segunda parte del capítulo 5, se plantea la propuesta de creación de un nuevo Geoparque Mundial de la UNESCO en la región del Rif, al norte de Marruecos. Esta propuesta se basa en la riqueza geológica, ecológica y cultural del área y busca complementar la actual Reserva de Biosfera Intercontinental. El geoparque integraría sitios clave con alto valor geológico y ecológico, patrimonio cultural, y programas de participación comunitaria para fomentar un desarrollo sostenible que beneficie tanto al medio ambiente como a la población local.

La propuesta se centra en crear un geoparque que integre cinco elementos clave:

- El macizo de Beni Bousera como centro geológico.
- El Parque Nacional de Talassemtane como núcleo de biodiversidad.
- La ciudad de Chefchaouen como capital cultural y turística.
- Las cascadas, gargantas y nacimientos de agua como atractivos ecoturísticos.
- Las comunidades locales como protagonistas del modelo de gestión.

El geoparque se fundamentaría en un modelo de gestión participativo, basado en la educación ambiental, el turismo científico, la valorización de saberes tradicionales y la cooperación internacional. Se plantea también como una vía para fortalecer la economía local, especialmente de mujeres y jóvenes, a través de actividades vinculadas al ecoturismo, la artesanía y los productos locales.

Finalmente, la investigación subraya la importancia de la gobernanza, la financiación y la implicación de las comunidades en el éxito de la conservación patrimonial. Aprender del modelo español y aprovechar los recursos únicos del Rif ofrece a Marruecos la oportunidad de ampliar su presencia en la red de sitios UNESCO. Esta iniciativa también puede servir de referencia para otras regiones del mundo donde

se busca integrar conservación y desarrollo territorial de forma armónica.

Conclusiones

En esta tesis doctoral, presentamos los principales desafíos de Marruecos en relación con las complejidades que rodean la preservación del patrimonio y el reconocimiento de la UNESCO. Diversas variables contribuyen a la diferencia en el número de sitios reconocidos por la UNESCO (geoparques, reservas de la biosfera y sitios Patrimonio Mundial) entre Marruecos y España. Realizamos un análisis comparativo entre Marruecos y España, centrándonos en las diferencias significativas en la documentación y el conocimiento público de los sitios designados por la UNESCO en ambos países. Además, nos centramos en un análisis exhaustivo de estas diferencias, en particular examinando cómo los enfoques y estrategias de España pueden fundamentar y potencialmente mejorar los esfuerzos de conservación y la participación pública en Marruecos.

Esta tesis explora dos aspectos principales: el primero revela los desafíos que subyacen al limitado reconocimiento de los sitios de la UNESCO por parte de Marruecos, y el segundo es relevante para la recomendación de desarrollar un nuevo geoparque en la región del Rif para promover la conservación del patrimonio y el desarrollo sostenible.

Desafíos tras la falta de sitios designados por la UNESCO en Marruecos.

Ofrecimos información crucial sobre los desafíos, las oportunidades y las posibles estrategias para mejorar la gestión de los sitios patrimoniales y los procesos de designación de la UNESCO en Marruecos.

Las principales conclusiones se resumen a continuación:

- Desafíos de gobernanza y gestión:

El modelo de gobernanza centralizada de Marruecos limita la participación efectiva de las autoridades locales y las comunidades en la gestión del patrimonio, lo que genera retrasos burocráticos e ineficiencias.

- Financiación y asignación de recursos:

Marruecos enfrenta importantes limitaciones financieras para la preservación del patrimonio. Depende en gran medida de presupuestos gubernamentales limitados y carece de acceso a mecanismos de financiación diversificados, como las asociaciones público-privadas y las subvenciones internacionales.

- Participación comunitaria:

La escasa participación comunitaria y la falta de programas educativos sobre la preservación del patrimonio debilitan los esfuerzos de conservación y obstaculizan el desarrollo sostenible.

- Transparencia en políticas y documentación:

Marruecos se enfrenta a una aplicación inconsistente de políticas y a una documentación limitada, lo que dificulta la preparación de expedientes de nominación sólidos para el reconocimiento de la UNESCO.

- Perspectivas comparativas de España:

Las lecciones de España destacan la importancia de la gobernanza descentralizada, las prácticas de turismo sostenible y la sólida colaboración entre las partes interesadas para lograr una gestión patrimonial exitosa y un mayor reconocimiento de la UNESCO. Marruecos podría beneficiarse de la adopción de algunas de estas buenas prácticas para fortalecer sus esfuerzos de conservación del patrimonio.

- Entrevistas y perspectivas de las partes interesadas:

Las entrevistas con las partes interesadas reforzaron la necesidad de una gobernanza local más sólida, la participación comunitaria y estrategias de financiación innovadoras en Marruecos.

Recomendación de un nuevo geoparque en la región del Rif.

Esta tesis ha explorado la oportunidad de desarrollar un nuevo geoparque debido a su rica biodiversidad y geodiversidad, que complemente la reserva de la biosfera existente en el norte de Marruecos. El potencial de la región del Rif para ser declarada Geoparque Mundial de la UNESCO, destacando sus singulares activos geológicos, ecológicos, culturales y turísticos. Los hallazgos destacan la diversidad de formaciones geológicas de la región, incluyendo el Macizo Ultramáfico de Beni Bouzra y las formaciones kársticas de Oudlau, así como su rica biodiversidad en áreas protegidas como los Parques Nacionales de Bouhachem y Talasemtane. El hecho de

que la región cuente con monumentos históricos y culturales, como la Medina de Tetuán, la convierte en una candidata atractiva para la designación de Geoparque. Concluimos que el Geoparque del Rif propuesto se ajusta a los estándares de la UNESCO, demostrando un importante patrimonio geológico, potencial para el turismo sostenible y una activa participación comunitaria. La integración de cooperativas locales e iniciativas educativas garantiza que los beneficios del desarrollo del Geoparque se compartan equitativamente, fomentando tanto la conservación del medio ambiente como el desarrollo socioeconómico.

Perspectivas futuras

El trabajo futuro debería centrarse en promover la conservación del patrimonio y apoyar iniciativas de reconocimiento en Marruecos. Las investigaciones posteriores podrían evaluar la viabilidad y las consecuencias a largo plazo de iniciativas como el propuesto Geoparque del Rif mediante la realización de evaluaciones ambientales exhaustivas, la facilitación del diálogo con las partes interesadas y el análisis de la viabilidad económica. Las iniciativas de colaboración con entidades internacionales y países vecinos podrían ser cruciales para difundir la experiencia y coordinar los objetivos regionales de conservación. Además, la colaboración con las comunidades locales, el mundo académico y las partes interesadas será esencial para mejorar las metodologías de gestión, crear marcos educativos y promover un turismo sostenible que beneficie la integridad ambiental y a las poblaciones locales.

Resumo Ampliado

A preservación do patrimonio natural e cultural converteuse nun dos retos globais máis importantes do século XXI. Ante unha degradación ambiental sen precedentes, a perda de biodiversidade e as presións da globalización, as nacións de todo o mundo loitan por equilibrar a conservación do patrimonio co desenvolvemento socioeconómico. Os marcos da UNESCO, incluídas as Reservas da Biosfera e os Xeoparques Mundiais, convertéronse en fundamentais para abordar estes desafíos. Estas designacións non só protexen importantes sitios ecolóxicos, xeolóxicos e culturais, senón que tamén serven como catalizadores para a educación, a investigación científica e o turismo sostible. Ao promover unha abordaxe holística que integra a conservación co desenvolvemento humano, as iniciativas da UNESCO aliñanse cos obxectivos máis amplos da Axenda 2030 para o Desenvolvemento Sostible.

Marrocos, coa súa rica biodiversidade, os seus diversos ecosistemas e as súas formacións xeolóxicas únicas, está nunha posición única para beneficiarse destes marcos. Non obstante, o país afronta importantes desafíos para lograr o recoñecemento da UNESCO, como o demostra o número limitado de sitios designados en comparación cos países mediterráneos veciños, como España. O contraste entre os dous países non se atribúe a unha relación causal, senón ao resultado de diferentes traxectorias históricas, institucionais e gobernamentais que deron forma ao desenvolvemento da súa herdanza. Aínda que Marrocos presume dun patrimonio cultural e natural excepcional, a disparidade nas designacións da UNESCO reflicte barreiras subxacentes de gobernanza, financeiras e sociopolíticas que dificultan a xestión e o recoñecemento eficaces dos sitios.

Este estudo aborda dous aspectos críticos da xestión do patrimonio en Marrocos. O primeiro é unha exploración dos desafíos sistémicos que contribúen

á infrarrepresentación de Marrocos nas designacións da UNESCO, especialmente en comparación con España, que aproveitou con éxito os seus activos naturais e culturais para acadar o recoñecemento internacional. O segundo aspecto céntrase nunha proposta con visión de futuro para o desenvolvemento dun xeoparque na rexión do Rif, unha zona de inmensa importancia ecolóxica e xeolóxica. Esta iniciativa ten como obxectivo abordar as lagoas xeográficas e temáticas de Marrocos no recoñecemento do patrimonio, ao tempo que fomenta o desenvolvemento sostible nunha das súas rexións máis biodiversas.

Ao examinar estas cuestións, esta investigación busca contribuír ao discurso máis amplo sobre a conservación do patrimonio e o desenvolvemento sostible. Destaca a importancia da reforma da gobernanza, a participación da comunidade e as estratexias de conservación innovadoras para lograr o recoñecemento internacional e garantir a preservación a longo prazo dos bens naturais e culturais. A través dunha análise comparativa de Marrocos e España, o estudo proporciona información práctica que pode servir de base para as políticas nacionais e rexionais, mentres que o Xeoparque do Rif proposto serve como modelo para integrar a biodiversidade e a xeodiversidade nun marco de conservación cohesivo.

Nas seguintes seccións, este resumo ampliado afonda nos antecedentes, as hipóteses, os obxectivos, as metodoloxías, os achados e as contribucións do estudo, proporcionando unha visión xeral completa do seu alcance e importancia.

Palabras clave: programas da UNESCO, xeoparque, reserva da biosfera, Marrocos, España, Xeoturismo, Desenvolvemento Sostible.

FONDO

A protección e o desenvolvemento sostible do patrimonio natural e cultural convertéronse en prioridades globais críticas ante a crecente degradación ambiental, o cambio climático e a rápida urbanización. As Reservas da Biosfera e os Xeoparques Mundiais da UNESCO son marcos recoñecidos internacionalmente que teñen como obxectivo conservar a biodiversidade, promover o uso sostible dos recursos naturais e mellorar as condicións socioeconómicas locais. As reservas da biosfera céntranse na preservación dos ecosistemas e nas interaccións entre os humanos e a natureza, mentres que os xeoparques céntranse na protección e promoción do patrimonio xeolóxico.

Xuntos, contribúen significativamente aos obxectivos de desenvolvemento sostible mediante a promoción da educación, o turismo e a participación da comunidade.

Marrocos, coa súa excepcional biodiversidade e xeodiversidade, ten un inmenso potencial para o recoñecemento da UNESCO. Non obstante, o país segue sendo significativamente infrarrepresentado nas designacións da UNESCO en comparación cos países mediterráneos veciños, como España. Mentres que Marrocos ten un xeoparque (M'goun) e unha Reserva da Biosfera Intercontinental do Mediterráneo no norte, España conseguiu unha rede máis extensa de sitios da UNESCO, que inclúe numerosas reservas da biosfera e xeoparques. Esta disparidade fai que se interroguen os factores que inflúen no recoñecemento e na xestión do patrimonio nestes dous países. A rexión do Rif, no norte de Marrocos, coas súas características ecolóxicas e xeolóxicas únicas, presenta unha oportunidade para abordar este desequilibrio mediante o desenvolvemento dun xeoparque que complemente as reservas da biosfera existentes e mellore o desenvolvemento sostible da zona.

HIPÓTESE

Este estudo formula a hipótese de que as estruturas de gobernanza, os mecanismos de financiamento, a participación da comunidade e as estratexias de turismo sostible son factores clave que inflúen na disparidade nas designacións da UNESCO entre Marrocos e España. Ademais, formula a hipótese de que o establecemento dun xeoparque na rexión do Rif pode servir como modelo para equilibrar a conservación do patrimonio e o desenvolvemento socioeconómico, abordando as lagoas xeográficas e temáticas na representación do patrimonio de Marrocos.

OBXECTIVOS

A investigación baséase en dous obxectivos principais:

1. Explorar e analizar os desafíos sistémicos que contribúen ao recoñecemento limitado de Marrocos por parte da UNESCO mediante un estudo comparativo con España.
2. Propoñer un marco detallado para o desenvolvemento dun xeoparque na rexión do Rif, facendo fincapé na integración da conservación da xeodiversidade e

a biodiversidade co desenvolvemento sostible baseado na comunidade. Os obxectivos secundarios inclúen:

- Examinar o papel dos factores históricos, factores políticos e socioeconómicos na configuración das prácticas de xestión do patrimonio de ambos os países.
- Investigar as barreiras de gobernanza, políticas e financeiras que dificultan a capacidade de Marrocos para obter un maior recoñecemento da UNESCO.
- Avaliar os posibles beneficios socioeconómicos e ambientais do establecemento dun xeparque na rexión do Rif.

METODOLOXÍA

O estudo emprega unha abordaxe multimétodo que combina métodos de investigación cualitativos e comparativos para acadar os seus obxectivos. As metodoloxías clave inclúen:

1. Entrevistas coas partes interesadas: o Realizáronse entrevistas con responsables políticos, expertos en patrimonio e membros da comunidade local en Marrocos e España para comprender as súas percepcións sobre as designacións da UNESCO e as prácticas de xestión de sitios.

- Preguntas centradas na gobernanza, o financiamento, a participación da comunidade e o impacto socioeconómico dos sitios da UNESCO.

2. Análise de expedientes e documentos de políticas:

• Analizáronse arquivos históricos, marcos políticos e expedientes de candidatura da UNESCO para rastrexar a evolución das prácticas de conservación do patrimonio en ambos os países.

- A análise centrouse na identificación de modelos clave de gobernanza, marcos lexislativos e mecanismos institucionais que inflúen no recoñecemento dos sitios patrimoniais.

3. Avaliacións de campo: • Realizáronse avaliacións in situ en sitios da UNESCO existentes e potenciais en Marrocos, así como noutras rexións do Rif. • Observacións centradas no estado físico dos sitios, as medidas de conservación e o nivel de participación da comunidade.

4. Análise comparativa: • Realizouse unha comparación sistemática entre Marrocos e España en múltiples dimensións, incluíndo a gobernanza, o financiamento,

a participación comunitaria e as estratexias de turismo sostible. • Exploráronse temas como a descentralización, a colaboración das partes interesadas e as asociacións internacionais.

5. Marco de desenvolvemento de xeoparques: • Desenvolveuse un marco conceptual para o establecemento dun xeoparque na rexión do Rif baseado nas mellores prácticas dos sitios da UNESCO existentes e nas achegas das partes interesadas.

RESULTADOS

Os resultados do estudo revelan información clave sobre a discrepancia entre as designacións da UNESCO e o potencial de desenvolvemento dos xeoparques en Marrocos:

1. Gobernanza e marcos políticos:

- O modelo de gobernanza centralizada de Marrocos limita a participación das autoridades e comunidades locais na xestión dos sitios patrimoniais, creando ineficiencia burocrática e dificultando o desenvolvemento de estratexias de conservación.

- A estrutura de gobernanza descentralizada en España, que permite O sitio, apoiado polas autoridades rexionais e locais, facilita unha xestión eficaz do patrimonio e contribuíu significativamente ao seu éxito nas candidaturas da UNESCO.

2. Mecanismos de financiamento:

- Marrocos afronta importantes restricións financeiras no ámbito da conservación do patrimonio, xa que depende en gran medida do financiamento gobernamental e ten un acceso limitado a subvencións internacionais ou investimento privado.

- España se beneficia de diversas fontes de financiamento, como programas da UE, asociacións público-privadas e ingresos procedentes do turismo, o que garante a sustentabilidade financeira dos sitios da UNESCO.

3. Participación da comunidade:

- A escasa concienciación e participación da comunidade en Marrocos prexudica os esforzos de conservación do patrimonio e reduce os beneficios sociais e económicos do recoñecemento do patrimonio.

- En contraste, España implica activamente ás comunidades locais na xestión do sitio e nos procesos de toma de decisións, fomentando un sentido de propiedade e

participación.

4. Turismo e desenvolvemento sostible:

- A infraestrutura turística pouco desenvolvida de Marrocos e a falta de estratexias turísticas sostibles limitan a capacidade dos sitios patrimoniais para impulsar o crecemento económico local.

- España combinou con éxito o turismo sostible coa preservación do patrimonio, aproveitando os seus sitios Patrimonio Mundial da UNESCO como principais atraccións para visitantes internacionais.

5. Potencial de desenvolvemento de xeoparques:

- A rexión do Rif, coa súa rica diversidade biolóxica e xeográfica, é ideal para a creación dun xeoparque.

- O xeoparque proposto podería mellorar o recoñecemento internacional da zona, promover o turismo sostible e proporcionar oportunidades educativas e de investigación. **CONTRIBUCIÓN** Este estudo fai varias contribucións significativas ao campo da xestión do patrimonio e o desenvolvemento sostible:

1. Perspectivas comparativas:

- O estudo ofrece unha análise comparativa detallada de Marrocos e España, destacando as mellores prácticas en gobernanza, financiamento e participación comunitaria que poden informar as estratexias de xestión do patrimonio de Marrocos.

2. Proposta de xeoparque:

- O marco proposto para un xeoparque na rexión do Rif ofrece unha solución ráctica para abordar a disparidade no recoñecemento do patrimonio de Marrocos, ao tempo que se promove a conservación e o desenvolvemento socioeconómico.

3. Recomendacións políticas:

- A investigación identifica as reformas clave en materia de políticas e gobernanza que se necesitan fortalecer o marco de xestión do patrimonio de Marrocos, incluíndo a descentralización, creación de capacidades para as autoridades locais e desenvolvemento de mecanismos de financiamento innovadores.

4. Contribución académica:

- Ao integrar a biodiversidade e a xeodiversidade nun marco de conservación, único, o estudo avanza na comprensión das abordaxes holísticas da xestión do patrimonio. As principais achegas desta tese descríbense nos seguintes dous capítulos: No capítulo 4, presentamos as metodoloxías e describimos as técnicas cualitativas

empregadas para recompilar información detallada sobre as variables que afectan as iniciativas de conservación do patrimonio en ambos os países. Estas técnicas incluían a análise de documentos, as avaliacións de campo e as entrevistas. Usando unha metodoloxía analítica comparativa, o estudo busca sintetizar información extraída de arquivos históricos, documentos políticos, opinións das partes interesadas e observacións directas para proporcionar unha comprensión detallada da dinámica subxacente que impulsa o recoñecemento da UNESCO. Ademais de garantir a validez e a fiabilidade dos resultados, este rigor metodolóxico posiciona a investigación para proporcionar suxestións útiles para mellorar as técnicas de conservación do patrimonio.

O capítulo 5, Resultados e debate, presenta os achados dun estudo comparativo entre os sitios designados pola UNESCO en Marrocos e España, mediante unha análise integrada que combina datos cuantitativos, rexistros históricos, documentos políticos e entrevistas con partes interesadas clave. Esta metodoloxía permite examinar as disparidades na designación de sitios, os modelos de xestión e o nivel de participación da comunidade. En lugar de separar os resultados da interpretación, o capítulo entrelazaos para proporcionar unha comprensión máis profunda e coherente dos factores que inflúen no recoñecemento do patrimonio e na eficacia da conservación. Os resultados amosan diferenzas notables na área, xestión e organización das Reservas e Xeoparques entre os dous países.

En España, a xestión recae principalmente nas Comunidades Autónomas ou en entidades públicas e privadas (como consorcios, fundacións ou asociacións), mentres que en Marrocos a xestión é centralizada polo goberno. As reservas españolas están coordinadas a través da Rede Española de Reservas da Biosfera e do Comité Español do programa MaB da UNESCO, co apoio dos consellos científicos e de xestión. Ademais, algunhas comunidades autónomas contan coas súas propias redes, como a Rede Galega e a Rede Andaluza. Os xeoparques de España están xestionados por un Comité de Coordinación no que participan representantes de cada xeoparque e da UNESCO.

En contraste, Marrocos ten unha estrutura centralizada que, aínda que racionaliza algúns procedementos, pode limitar a participación das partes interesadas locais e reducir a flexibilidade na xestión adaptativa do sitio. Na segunda parte do capítulo 5, preséntase a proposta para a creación dun novo Xeoparque Mundial da UNESCO na rexión do Rif, no norte de Marrocos. Esta proposta baséase na riqueza xeolóxica, ecolóxica e cultural da zona e busca complementar a Reserva Intercontinental da

Biosfera xa existente. O xeparque integraría sitios clave de alto valor xeolóxico e ecolóxico, patrimonio cultural e programas de participación comunitaria para fomentar un desenvolvemento sostible que beneficie tanto o medio ambiente como a poboación local.

A proposta céntrase na creación dun xeparque que integre cinco elementos clave:

- O macizo de Beni Bousera como centro xeolóxico.
- O Parque Nacional de Talassemtane como centro de biodiversidade.
- A cidade de Chefchaouen como capital cultural e turística.
- Fervenzas, gargantas e mananciais como atractivos ecoturísticos.
- As comunidades locais como protagonistas do modelo de xestión.

O xeparque basearíase nun modelo de xestión participativa, baseado na educación ambiental, o turismo científico, a valorización do coñecemento tradicional e a cooperación internacional. Tamén se propón como unha forma de fortalecer a economía local, especialmente para as mulleres e a mocidade, a través de actividades relacionadas co ecoturismo, a artesanía e os produtos locais.

Finalmente, a investigación destaca a importancia da gobernanza, o financiamento e a participación da comunidade para o éxito da conservación do patrimonio. Aprender do modelo español e aproveitar os recursos únicos do Rif ofrécelle a Marrocos a oportunidade de ampliar a súa presenza na rede da UNESCO. Esta iniciativa tamén pode servir de referencia para outras rexións do mundo que buscan integrar harmoniosamente a conservación e o desenvolvemento territorial.

CONCLUSIÓNS

Nesta tese doutoral, presentamos os principais desafíos de Marrocos en relación coas complexidades que rodean a preservación do patrimonio e o recoñecemento da UNESCO. Varias variables contribúen á diferenza no número de sitios recoñecidos pola UNESCO (xeparques, reservas da biosfera e sitios Patrimonio da Humanidade) entre Marrocos e España. Realizamos unha análise comparativa entre Marrocos e España, centrándonos nas diferenzas significativas na documentación e no coñecemento público dos sitios designados pola UNESCO en ambos os países. Ademais, centrámonos nunha análise exhaustiva destas diferenzas, examinando en particular como as abordaxes

e estratexias de España poden informar e potencialmente mellorar os esforzos de conservación e a participación pública en Marrocos.

Esta tese explora dous aspectos principais:

o primeiro revela os desafíos subxacentes ao recoñecemento limitado dos sitios da UNESCO por parte de Marrocos, e o segundo é relevante para a recomendación de desenvolver un novo xeparque na rexión do Rif para promover a conservación do patrimonio e o desenvolvemento sostible.

- Desafíos derivados da falta de sitios designados pola UNESCO en Marrocos Ofrecemos información crucial sobre os desafíos, as oportunidades e as posibles estratexias para mellorar a xestión dos sitios patrimoniais e os procesos de designación da UNESCO en Marrocos.

As principais conclusións resúmense a continuación:

- Desafíos de gobernanza e xestión:

O modelo de gobernanza centralizada de Marrocos limita a participación efectiva das autoridades locais e das comunidades na xestión do patrimonio, o que leva a atrasos e ineficiencias burocráticas.

- Financiamento e asignación de recursos:

Marrocos afronta importantes restricións financeiras para preservar o seu patrimonio. Depende en gran medida de orzamentos gobernamentais limitados e carece de acceso a mecanismos de financiamento diversificados, como asociacións público-privadas e subvencións internacionais.

- Participación da comunidade:

A escasa participación da comunidade e a falta de programas educativos sobre a preservación do patrimonio socavan os esforzos de conservación e dificultan o desenvolvemento sostible.

- Transparencia nas políticas e na documentación:

Marrocos enfróntase a unha aplicación de políticas inconsistente e a unha documentación limitada, o que dificulta a preparación de expedientes de candidatura sólidos para o recoñecemento da UNESCO.

- Perspectivas comparadas de España: As leccións de España salientan a importancia da gobernanza descentralizada, as prácticas turísticas sostibles e unha forte colaboración das partes interesadas para lograr unha xestión do patrimonio exitosa e un maior recoñecemento da UNESCO. Marrocos podería beneficiarse da

adopción dalgunhas destas mellores prácticas para fortalecer os seus esforzos de conservación do patrimonio.

- Entrevistas e perspectivas das partes interesadas:

As entrevistas coas partes interesadas reforzaron a necesidade dunha gobernanza local máis forte, unha participación comunitaria e estratexias de financiamento innovadoras en Marrocos.

- Recomendación para un novo xeoparque na rexión do Rif

Esta tese explorou a oportunidade de desenvolver un novo xeoparque, dada a súa rica biodiversidade e xeodiversidade, que complementaría a reserva da biosfera existente no norte de Marrocos. A rexión do Rif ten o potencial de ser declarada Xeoparque Mundial da UNESCO, destacando os seus activos xeolóxicos, ecolóxicos, culturais e turísticos únicos.

Os achados destacan as diversas formacións xeolóxicas da rexión, incluíndo o macizo ultramáfico de Beni Bouzra e as formacións cársticas de Oudlau, así como a súa rica biodiversidade en áreas protexidas como os parques nacionais de Bouhachem e Talasemtane. O feito de que a rexión conte con monumentos históricos e culturais, como a Medina de Tetuán, convértea nunha candidata atractiva para a designación de Xeoparque. Concluímos que o Xeoparque do Rif proposto cumpre cos estándares da UNESCO, o que demostra un patrimonio xeolóxico significativo, potencial para o turismo sostible e participación activa da comunidade.

A integración de cooperativas locais e iniciativas educativas asegura que os beneficios do desenvolvemento do Xeoparque se repartan de forma equitativa, fomentando tanto a conservación ambiental como o desenvolvemento socioeconómico.

PERSPECTIVAS DE FUTURO

O traballo futuro debería centrarse na promoción da conservación do patrimonio e no apoio ás iniciativas de recoñecemento en Marrocos. Investigacións adicionais poderían avaliar a viabilidade e as consecuencias a longo prazo de iniciativas como o proposto Xeoparque do Rif mediante a realización de avaliacións ambientais exhaustivas, a facilitación do diálogo coas partes interesadas e a análise da viabilidade económica. As iniciativas de colaboración con organizacións internacionais e países veciños poderían ser cruciais para difundir experiencias e coordinar os obxectivos rexionais

de conservación. Ademais, a colaboración coas comunidades locais, a academia e as partes interesadas será esencial para mellorar as metodoloxías de xestión, crear marcos educativos e promover un turismo sostible que beneficie a integridade ambiental e as poboacións locais.

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Chapter 1

Introduction

(No publication has been directly derived from this chapter)

There are an estimated 8.7 million plant and animal species on Earth, many of which have not yet been identified [81]. However, biodiversity is under severe threat due to a combination of natural factors such as frequent droughts and human activities such as overexploitation of natural resources, misuse of chemicals, and the introduction of alien species [124]. The Millennium Ecosystem Assessment has highlighted the rapid and widespread changes that have occurred in ecosystems over the past 50 years, resulting in significant and often irreversible biodiversity loss [57]. In response, international bodies such as UNESCO and the International Union for Conservation of Nature (IUCN) have compiled inventories of protected areas worldwide to conserve these vital ecosystems [48]. The goal is to designate at least 17% of terrestrial and inland water areas and 10% of marine and coastal areas as protected by 2020 [106].

Areas recognized by UNESCO and its member states as falling under one or more of three different categories—Biosphere Reserves, World Heritage Sites, and Global Geoparks—are known as UNESCO-designated sites. The member state (or states in the case of transboundary sites) that the nominated territories belong to nominates all UNESCO-designated sites. Upon recognition, the nominating member state retains sovereign power over the nominated areas. According to the specific guidelines and protocols of each of the three programs, elected bodies made up of delegates from UNESCO member states decide whether to designate a particular site as a UNESCO World Heritage Site.

1.1. Statement of the Research Problem

The 1972 World Heritage Convention recognized World Heritage sites, which are governed by relevant laws and regulations. The three designations are now all specifically linked to the contribution of each designated site towards sustainable development in and around the site itself, as well as in society at large through the commitment made to the program by the nominating member state, even though each one addresses a different set of issues and meets a different set of criteria. Each program was created with a specific goal in mind, even if it is now explicitly linked to sustainable development. In the middle of the 1970s, the first UNESCO-designated sites—Biosphere Reserves and World Heritage sites—were created, specifically mentioning their function in monitoring and evaluating the world’s environment (for Biosphere Reserves) and conserving and safeguarding natural and cultural heritage of “outstanding universal value” (for World Heritage sites). UNESCO Global Geoparks, the most recent addition, developed from a non-governmental network that received UNESCO status in 2015.

1.1 Statement of the Research Problem

The recognition of natural and cultural heritage sites by UNESCO stands as a testament to their outstanding universal value, serving as guardians of humanity’s collective memory and natural treasures. Morocco and Spain, two nations profoundly rich in historical, cultural, and natural heritage, share a landscape adorned with geological wonders, pristine landscapes, and cultural traditions that transcend time. Despite their proximity and intertwined histories, there exists a notable dissonance in the number of UNESCO-designated sites between the two countries.

Spain boasts a vast array of UNESCO World Heritage Sites, far surpassing Morocco’s count. This raises the pertinent question: What factors contribute to Spain’s abundance of UNESCO-designated sites compared to Morocco’s relatively modest representation? This research problem encapsulates a multidimensional inquiry into the complex interplay of historical, cultural, environmental, and socio-political factors influencing the nomination, recognition, and preservation of UNESCO-designated sites in Morocco and Spain. To comprehensively address this question, the research will delve into several key dimensions:

- **Cultural Heritage and Identity Dynamics**

Morocco and Spain's diverse cultural landscapes, which encompass indigenous traditions, architectural marvels, and intangible cultural heritage, play pivotal roles in UNESCO site nominations and conservation efforts [126].

- Environmental Conservation and Biodiversity

Each country's ecological diversity and conservation priorities influence the designation of Biosphere Reserves and natural World Heritage Sites, reflecting varying approaches to environmental stewardship and sustainable development [126].

- Geological Heritage and Geopark Potential

Geological formations, landforms, and geological heritage sites serve as foundations for Geoparks, highlighting the geological significance and educational value of landscapes in Morocco and Spain (Asociación Española de Geoparques, 2019).

- Policy Frameworks and Institutional Capacities

National policies, legal frameworks, and institutional capacities for heritage management and UNESCO site nominations shape the efficacy and inclusivity of heritage preservation efforts in Morocco and Spain [104].

- Tourism Development and Economic Incentives

The relationship between the growth of the tourism industry, financial incentives, and UNESCO designation highlights the financial incentives and sustainability issues related to historic tourism in both nations [101].

1.2 Aim of the Study

The objective of this study is to examine and elucidate the several factors that contribute to the disparity in the quantity of UNESCO-recognized sites (biosphere reserves, geoparks, and World Heritage Sites) between Morocco and Spain. By carefully examining historical, cultural, environmental, and sociopolitical aspects, the research seeks to comprehend the fundamental elements influencing the nomination, recognition, and protection of these sites in both nations.

This study looks into the historical legacies, cultural dynamics, environmental conservation efforts, policy frameworks, and economic incentives that affect UNESCO site nominations in order to gain a comprehensive understanding of the complexities surrounding heritage preservation and UNESCO recognition in Morocco and Spain.

1.3. Objectives

This study also aims to offer practical insights and suggestions for enhancing heritage conservation initiatives, fostering intercultural dialogue, and promoting sustainable development in the context of UNESCO-designated sites. In light of this, the project seeks to further our understanding of cultural diplomacy, sustainable tourism, and heritage management. This will have global consequences for academics, policy-makers, and cultural heritage practitioners.

1.3 Objectives

1. Evaluate the following activities that help Morocco and Spain achieve the Sustainable Development Goals (SDGs):

Examine the various actions carried out by pertinent organizations in Spain and Morocco, as reported in different sources, to ascertain how well they correspond with the 17 Sustainable Development Goals (SDGs) specified in the 2030 Agenda.

2. Correlate Activities with Corresponding SDGs: Establish links between each activity identified in Spain and Morocco and the corresponding SDG(s), examining how these activities contribute to sustainable development objectives in each country.

3. Utilize Qualitative Analysis for Comparative Evaluation:

Employ a qualitative analysis approach to compare and contrast the activities and their impact on SDGs in Spain and Morocco, providing insights into the effectiveness of approaches employed in each country.

4. Conduct Interviews with Stakeholders:

Conduct interviews with key stakeholders, including government officials, NGOs, and community representatives, in Spain and Morocco to gather insights into the implementation of activities related to SDGs and to gain perspectives on challenges and opportunities.

1.4 Research Questions

This study focuses on these research questions, which establish a distinct direction into the causes of the discrepancy in UNESCO-recognized sites between Spain and Morocco, enabling a thorough examination of the multiple aspects involved:

- What are the key factors contributing to the difference in the number of UNESCO-designated sites between Spain and Morocco?
- How do historical and cultural factors influence recognizing UNESCO-designated sites in Spain and Morocco?
- What role do environmental and geographical considerations play in the designation of UNESCO sites in Spain and Morocco?
- How do socio-political dynamics and institutional capacities affect UNESCO sites' nomination and recognition process in Spain and Morocco?
- How do local community empowerment and involvement affect the recognition and maintenance of UNESCO-designated monuments in Morocco and Spain?
- What can be learned from Spain's experience in obtaining a greater number of UNESCO-recognized sites than Morocco, and how can this information be used to improve Morocco's recognition in the future?

1.5 Research Assumptions

Our assessment is based on certain assumptions about Morocco and Spain's UNESCO site numbers. First, historical and cultural considerations influence site classification; Spain's rich historical record may explain why it has more sites than Morocco. We also indicate that geographical and environmental factors influence site selection and that Spain's diversified landscapes and natural features may have contributed to its UNESCO recognition.

We also believe that socio-political developments in Morocco and Spain may affect nomination processes and the number of allowed locations. Spain's expanding UNESCO recognition is due to economic incentives and tourism development. We assume site acknowledgement requires community empowerment and involvement,

1.6. Limitations of the Study

and Spain may handle it differently from Morocco. Spain's experience could assist Morocco's recognition attempts, as it can provide valuable guidance. Our comparative research of Moroccan and Spanish UNESCO sites is based on these assumptions.

1.6 Limitations of the Study

The purpose of this study is to explain the disparity in UNESCO designation sites between Spain and Morocco, although it is subject to certain limitations. Initially, our research is based on insufficient or biased data, which may limit its overall comprehensiveness. Differences in the availability, accessibility, and reliability of data on the Moroccan side can also limit the ability to make comparisons. The complex social, political, cultural, and economic processes involved in site selection may pose challenges in understanding the reasons why there are a greater number of declared sites in Spain than in Morocco. The scope of our analysis is limited to UNESCO geoparks and biosphere reserves, which means that it may not include other protected places in both nations. Although we strive to provide impartial viewpoints, personal biases or assumptions may influence our analysis and interpretation. To minimize these limitations, we adopted a triangulated methodological approach that combined document analysis, interviews with key stakeholders, and field observations. This strategy allowed cross-verification of information from multiple sources, increasing the reliability and validity of the findings despite data constraints. The objective of our study is to examine the factors that influence the recognition of UNESCO sites in Spain and Morocco, despite existing constraints.

1.7 Thesis Outline

Chapter 2 presents an overview of the significance of large-scale UNESCO designations. Chapter 3, the literature review, exhibits general reviews of Biosphere Reserves and Geoparks in Morocco and Spain, providing an analysis of their characteristics, management, and impact on conservation and sustainable development based on the literature. Chapter 4 details the research methodology, describing the qualitative and comparative approaches used, including document analysis, interviews, and field observations.

Chapter 5 presents and discusses the main findings of the study, focusing on the disparities between Morocco and Spain in UNESCO site recognition and management, as well as the proposal for a new UNESCO Global Geopark in the Rif region. Finally, Chapter 6 offers the general conclusions, highlights the main contributions of the research, and proposes recommendations and perspectives for future work.

Chapter 2

Background

(No publication has been directly derived from this chapter)

In this Chapter, we will introduce the basic topics and concepts needed to explain our work. Spanish and Moroccan territories share similar natural, climatic, and environmental characteristics and are wealthy in world heritage sites. However, there is a stark contrast in the number of UNESCO sites between the two countries. The fact that Spain boasts a significantly higher number of UNESCO-designated sites than Morocco makes this study investigate the reasons behind this disparity and identify the factors contributing to Spain's success in obtaining UNESCO designations while Morocco falls behind.

2.1 Introduction to UNESCO-Designations Sites

2.1.1 Overview and Significance of UNESCO Designations

UNESCO stands for United Nations Educational, Scientific, and Cultural Organization. It advances peace and security by encouraging global cooperation in the areas of education, research, culture, communication, and information. UNESCO promotes information sharing and free thinking to promote mutual understanding and a better understanding of each other's lives. The 2030 Agenda, which was adopted by the UN General Assembly in 2015, contains the Sustainable Development Goals. UNESCO programs aid in achieving these goals [13].

2.1. Introduction to UNESCO-Designations Sites

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) was established in 1945 to foster global collaboration in the domains of education, the arts, research, and culture. Adopted in London in 1945, the UNESCO Constitution was enacted in 1946. The organization was born from a clear vision of achieving lasting peace, not only through economic and political agreements between nations but also by bringing people together and promoting peace. Intellectual and moral solidarity among humans.

To carry out this goal, UNESCO has initiated several groundbreaking projects throughout the years. Among these are a few of these:

- Man and the Biosphere Program (1971)
- World Heritage Convention (1972)
- Convention for the Protection of the Intangible Cultural Heritage (2003)

UNESCO also established global centers for scientific research, developed a global tsunami early warning system, implemented literacy campaigns that drove nation-building, and established global principles for scientific ethics and the human genome.

Globally speaking, UNESCO's initiatives help achieve the sustainable development objectives outlined in the 2030 Agenda, which was approved by the UN General Assembly in 2015. These programs are designed to be sustainable, global, and ambitious and are designed with the active participation of UNESCO. They cover different areas, including education, natural sciences, social sciences, humanities, culture, communication, and information.

UNESCO plays a pivotal role in protecting cultural and natural heritage through its World Heritage Sites, Biosphere Reserves, and Global Geoparks programs. These designations promote conservation, sustainable development, and international cooperation [75]. UNESCO provides technical assistance, capacity building, and public awareness campaigns to ensure effective site management [60]. This global recognition helps safeguard significant sites, fostering pride and support among local communities and governments [78]. By integrating cultural and natural heritage protection, UNESCO aims to preserve humanity's legacy for future generations [67].

“With 194 Member States, the United Nations Educational, Scientific and Cultural Organization contributes to peace and security by leading multilateral cooperation on education, science, culture, communication and information.”

UNESCO CONSTITUTION, 1945

2.1.2 Categories and Purposes of UNESCO Designations: Biosphere Reserves, UNESCO Geoparks, and World Heritage Sites.

Biosphere Reserves

Biosphere reserves are regions that include marine, coastal, and terrestrial ecosystems. They are dedicated to both the protection and the development of long-term solutions. These reserves are more than just ‘Science for Sustainability support sites’; they are unique spaces where interdisciplinary methods are tested to understand and oversee the dynamics and interrelationships between social and ecological systems. They are designated under UNESCO’s Man and Biosphere (MAB) Program. Their scope includes conflict prevention strategies and biodiversity management (UNESCO, 2023d). As of October 2023, Southeast Asia is home to 43 biosphere reserves (UNESCO, 2023e).

- **Goals and Objectives**

The primary goals of Biosphere Reserves include conserving biodiversity, fostering sustainability, supporting research and monitoring, providing education, and helping local communities develop ecologically sound practices [115].

2.1. Introduction to UNESCO-Designations Sites

“Headquartered in Paris, UNESCO has offices in 54 countries and employs over 2300 people. UNESCO oversees more than 2000 World Heritage sites, Biosphere Reserves and Global Geoparks; networks of Creative, Learning, Inclusive and Sustainable Cities; and over 13,000 associated schools, university chairs, training and research institutions. Audrey Azoulay - Director General.

“Since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed.”

UNESCO CONSTITUTION, 1945

- Biosphere Reserves as Living Laboratories

A major goal is to serve as 'living laboratories' for studying and demonstrating innovative approaches to integrated conservation and sustainable development. They provide real-world settings for researching interactions between people and the environment, testing new conservation strategies and policies, and developing models of sustainability [67].

- Sustainable Development

The goal of biosphere reserves is to balance the preservation of biodiversity with the wise use of natural resources and economic growth to support local

communities.

- **Criteria and Processes for Designating**

The Man and the Biosphere (MAB) Program of UNESCO, which emphasizes the protection of biodiversity and the sustainable use of natural resources, is in charge of designating Biosphere Reserves. To qualify as a Biosphere Reserve, a site must meet several criteria:

1. **Core Area:** The conservation aims of the reserve designate this zone for long-term protection.
2. **Buffer Zone:** This zone, which encircles the core region, encourages ecotourism, outdoor leisure, and environmental education—all of which are consistent with good ecological practices.
3. **Transition Area:** The farthest region of the reserve where the development and promotion of sustainable resource management techniques are underway.

The nation in which the site is located must first nominate the site for consideration. An application that is comprehensive and shows how the location satisfies the requirements must be submitted with this nomination. The International Coordinating Council of the MAB Program makes the ultimate designation decision after an advisory group evaluates the candidacy [45].

- **History and Development**

Biosphere Reserves are a notion that was created by UNESCO's MAB program in the early 1970s to establish protected areas representing major ecosystem types worldwide, integrating biodiversity conservation with sustainable resource use and human development [15].

- **Initial Designations and Growth**

The first Biosphere Reserves were designated in 1976 based on national nominations. By the mid-1990s, over 300 sites had been established worldwide [15]. Today, the World Network comprises over 759 Biosphere Reserves in 136 countries. Eleven more reserves, which cover a variety of habitats from mountainous to marine and coastal regions, have been approved by UNESCO for early 2024.

2.1. Introduction to UNESCO-Designations Sites

“The new designations come at a pivotal moment for humanity, as it grapples with a global biodiversity crisis intertwined with climate disruption. These new biosphere reserves play an essential role in sustainably preserving biodiversity, improving the living conditions of local populations and Indigenous Peoples, and fostering scientific research.”

AUDREY AZOULAY

- Conferences and Conventions

Since the concept of a Biosphere Reserve was first proposed in the 1970s, a number of international conferences and conventions have shaped the development and future paths of the World Network of Biosphere Reserves.

1. First International Biosphere Reserve Congress (1983): Organized by UNESCO in Minsk, Belarus.
2. Second Congress (1995): Held in Seville, Spain, adopting the Seville Strategy for Biosphere Reserves to enhance their core objectives and zone functions.
3. Madrid Action Plan (2008): Built on the Seville Strategy to integrate Biosphere Reserves into emerging sustainability programs.
4. Fourth World Congress (2016): Met in Lima, Peru, adopting the Lima Action Plan.

- **The Role of Local Communities**

Biosphere Reserves are essential for promoting sustainable development and biodiversity protection. Through their involvement in planning and management, these reserves provide an extraordinary chance to build a balance between economic development and conservation. Biosphere reserves, with their three primary roles and zones, provide a holistic strategy for preserving biological variety and encouraging sustainable usage [67].

The Biosphere Reserves best represent UNESCO's goal of balancing sustainable development and biodiversity protection for human well-being. Through the use of zoned buildings and transdisciplinary methodologies, they promote a balanced relationship between humans and the ecosystem, offering integrated solutions for peaceful coexistence between people and the environment.

UNESCO Geoparks

The idea of geoparks first appeared in the 1990s as the necessity to preserve Earth's geological heritage and promote geotourism became more widely recognized. European regional projects prepared the ground for UNESCO's 2004 introduction of the Global Geoparks Network (GGN) [92].

- **The Birth of Geoparks in Europe**

- 1. Early Initiatives**

Several European nations launched regional geological park initiatives in the early 1990s in an effort to preserve important geological locations and raise public understanding of Earth sciences. The Maestrazgo Cultural Park in Spain and the Vulkaneifel Geopark in Germany are two noteworthy instances of programs that employed geotourism to support socioeconomic development while protecting geological heritage [92].

- 2. Formation of the European Geoparks Network (EGN)**

In 2000, four European territories: the Vulkaneifel Geopark in Germany, the Petrified Forest of Lesvos in Greece, the Maestrazgo Cultural Park in Spain, and the Copper Coast in Ireland, came together to create the European Geoparks Network (EGN) [114]. This formalized collaboration

2.1. Introduction to UNESCO-Designations Sites

“UNESCO Global Geoparks (UGGp) are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development. Combining the bottom-up approach of combining conservation with sustainable development while involving local communities is becoming increasingly popular. At present, there are 213 UNESCO Global Geoparks in 48 countries.”

UNESCO

promoted exchanges between geological park initiatives and developed quality criteria focused on conserving geological heritage, promoting research and education, and supporting the sustainable development of regional economies.

- Establishment and Growth of the Global Geoparks Network (GGN)

1. Launch of the GGN

The EGN’s establishment set the stage for UNESCO to launch the GGN in 2004, advancing similar goals worldwide [91]. Chinese geoparks joined the

GGN at its inception. As of 2022, the GGN has expanded to include 169 geoparks across 44 countries, facilitating collaboration through conferences, publications, and joint programs.

2. Expanded Concept of Geoconservation

While early geoparks emphasized geological heritage, the concept has expanded to promote holistic "geoconservation" integrating abiotic, biotic, and cultural aspects of place [68]. There is a growing emphasis on linking geoconservation with biodiversity protection, environmental education, sustainable development, and community engagement. Local communities adopt geoparks as symbols of regional identity.

- **Criteria for a Global Geopark designation**

The application process involves a comprehensive dossier detailing the site's geological significance, conservation measures, and management plans. After an initial evaluation by UNESCO experts, an on-site assessment is conducted. The UNESCO Global Geoparks Council makes the final decision [49]. The criteria for a Global Geopark Designation include:

1. **Geological Significance:**

The site must have internationally significant geological features.

2. **Management Structure:**

Effective management that involves local communities and promotes geotourism and sustainable development.

3. **Education and Research:**

The site must provide opportunities for education, scientific research, and community engagement.

- **The Role of Geoparks in Sustainable Development**

- **Conservation and Protection**

Geoconservation is a core goal of geoparks, focused on protecting significant geological features, landforms, fossils, minerals, soils, and other abiotic nature [68]. Strategies include protective designations, management plans, monitoring, and restoration to ensure the long-term continuity of geoheritage sites and processes. In Spain, as an example, the

2.1. Introduction to UNESCO-Designations Sites

Sobrarbe-Pirineos Geopark illustrates successful local engagement and educational initiatives to preserve geological sites similarly [61].

– Geotourism

Closely linked is the concept of geotourism—tourism focused on landscapes with distinct geological character, leading to visitor appreciation and learning about Earth sciences and geoheritage [70]. Geoparks develop interpretive facilities, guided tours, trails, and promotional materials to maximize geotourism, generating economic benefits for local businesses and communities through a niche tourist market.

– Geoscience Communication

Effective geoscience communication to diverse public audiences is crucial for geopark success [68]. Interactive displays, exhibits, school programs, events, and mass media engage people with geosciences and foster the valuing of geoheritage. Concepts like deep time, planetary change, and environmental interconnectedness are highlighted.

– Community Involvement and Development

Local communities are integral to the success of UNESCO Global Geoparks. By involving residents in the management and promotion of geoparks, these initiatives foster a sense of ownership and responsibility. Community-based initiatives frequently involve educating local tour guides, fostering the growth of regional tourist enterprises, and promoting customs and expertise that support sustainable development [61].

– Sustainability and Regional Development

Sustainability is promoted through strategies mutually benefiting communities and environments by linking geoconservation with training, new enterprises, infrastructure, and sustainable tourism [92]. Local culture, history, ecology, and sustainable practices are highlighted as complements to geoheritage. Environmental education and sustainable regional development are reinforced together.

UNESCO Geoparks integrate geoheritage conservation with community development, geoscience communication, geotourism, and participatory management. The geopark concept tangibly links geological heritage,

habitats, and sustainable regional futures by forging connections between local populations and the earth beneath their feet. Their growth worldwide demonstrates the value of coupling geoscience communication, community development, and conserving "geodiversity", the diversity of rocks, minerals, fossils, and landforms that constitute the abiotic heritage of the Earth [61].

World Heritage Sites (WHS)

Some places are designated as World Heritage Sites by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) because of their extraordinary cultural, historical, scientific, or other significance. International treaties provide legal protection for these sites, which are of great value to humanity [125]. The aim was to ensure the protection of these sites for future generations, acknowledging that, regardless of the region in which they are located, they are of global significance and belong to all people [90].

- Goals and Objectives

- Identification and Recognition

The primary goal of World Heritage Sites is to identify and recognize places of exceptional cultural or natural importance to humanity. This awareness contributes to the conservation of these places, increasing public understanding of their importance, and encouraging a feeling of global stewardship [90].

- Protection and Preservation

By using robust legal frameworks and management practices, protect and maintain these places. This aids in shielding the location from dangers, including armed warfare, urbanization, and environmental deterioration. The international community has a shared obligation to protect global historic sites, as the global Heritage Convention emphasizes [113]. This shared duty results from an awareness of the global value of cultural and natural heritage and the necessity of international cooperation for their preservation [38].

- Promotion of International Cooperation

UNESCO works to promote collaborative efforts between countries to

2.1. Introduction to UNESCO-Designations Sites

exchange knowledge, resources, and best practices in heritage conservation. Such cooperation is crucial to addressing complex issues that transcend national borders, such as climate change and pollution [103].

– Sustainable Development

The program encourages the use of heritage sites to promote sustainable tourism, generating economic benefits for local communities while ensuring preservation for future generations. This approach balances conservation efforts with the socio-economic needs of the people living in and around heritage sites.

– Education and Public Awareness

Engaging the public helps inspire a global commitment to heritage preservation, ensuring that everyone feels a sense of responsibility toward protecting these valuable sites [100].

- Types of UNESCO Sites

UNESCO World Heritage Sites are categorized into three main types:

1. Cultural Heritage Sites

These consist of structures, monuments, and locations that have historical, artistic, archaeological, scientific, or anthropological significance. Examples include the Pyramids of Egypt, the Great Wall of China, and the historic city of Santiago de Compostela [125].

2. Natural Heritage Sites

These sites include places of scientific, conservation, or aesthetic importance; they also include habitats of vulnerable species and remarkable physical, biological, and geological structures. Examples include the Great Barrier Reef in Australia and the Galápagos Islands in Ecuador [117]

3. Mixed Heritage Sites

These locations are significant from a cultural and ecological standpoint. One such property is Ibiza, Biodiversity and Culture, a mixed-natural and cultural World Heritage Site that combines remarkable historical and archaeological monuments on the Ibiza island with a globally significant marine reserve nearby [125].

2.2 Contextualizing the Research Topic

2.2.1 Scope of the Research

The scope of the present work is to provide a comprehensive comparative analysis of UNESCO-designated sites between Morocco and Spain, focusing on three specific categories: Biosphere Reserves, UNESCO Geoparks, and World Heritage Sites. This study aims to examine the distribution, management, and impact of these sites within the two countries, highlighting similarities, differences, and distinctive features that support the preservation of cultural and natural heritage.

2.2.2 Rationale for the Study

Research Gap

Despite the global significance of UNESCO-designated sites, there is a noticeable research gap in comparative studies focusing specifically on the management and impacts of these sites between Morocco and Spain. Most existing literature addresses individual case studies or regional analyses without directly comparing countries with different cultural, economic, and political contexts [88, 129].

This thesis aims to fill this gap by comprehensively analyzing UNESCO Global Geoparks, Biosphere Reserves, and World Heritage Sites in Morocco and Spain, highlighting their similarities, differences, and unique challenges.

Importance of Studying UNESCO Designated Sites

The study of UNESCO-designated sites is a vital field of academic inquiry, offering numerous insights and benefits across cultural preservation, environmental conservation, sustainable development, education, and tourism.

- Cultural Preservation and Heritage Conservation

UNESCO designations are instrumental in safeguarding cultural heritage. These sites protect areas of outstanding cultural, historical, and architectural significance, ensuring the preservation of cultural identities for future generations [123](UNESCO, 2021). UNESCO promotes worldwide cultural understanding by fostering tolerance and appreciation for cultural variety through the

2.2. Contextualizing the Research Topic

recognition of sites with varied cultural roots [116]. Furthermore, repair and maintenance activities are supported by the financing and attention that come with designation, which is essential for keeping important heritage sites from deteriorating [78].

- Environmental Conservation and Tangible Heritage

Natural World Heritage Sites and UNESCO Biosphere Reserves are essential to environmental preservation. These locations serve as sanctuaries for endangered species, preserve important ecosystems, and support ecological balance [50]. These locations serve as role models for striking a balance between environmental preservation and human requirements by encouraging sustainable resource usage [37]. The adoption of sustainable practices in these regions exemplifies internationally replicable conservation techniques [45].

Conclusion

This study looks into the various sociopolitical and economic environments in Morocco and Spain that affect the management and designation of UNESCO-designated monuments. Analyzing Morocco's problems with resource distribution, governance, and administrative obstacles. This study aims to uncover the underlying reasons for the limited number of UNESCO designations despite its rich natural and cultural heritage [78, 49].

This thesis contributes to the academic understanding of heritage conservation and UNESCO recognition and offers practical insights for policymakers and heritage practitioners.

By identifying the successful strategies employed by Spain and the challenges encountered by Morocco, we will provide actionable recommendations for improving heritage preservation efforts, enhancing intercultural dialogue, and promoting sustainable development in the context of UNESCO-designated sites.

Chapter 3

Literature Review

(No publication has been directly derived from this chapter)

This chapter provides a comprehensive review of the literature related to biodiversity conservation and UNESCO-designated sites in Morocco and Spain. It explores the ecological richness of Moroccan protected areas, the structure and impact of UNESCO programs such as Biosphere Reserves, Global Geoparks, and World Heritage Sites, and reviews recent initiatives and proposals for future designations. Additionally, it offers a comparative perspective by examining Spain's well-established network of protected areas, highlighting differences in governance, implementation, and conservation outcomes. This literature review forms the contextual basis for the comparative analysis developed in the following chapters.

3.1 Maintaining Biodiversity and Protected Areas in Morocco

Morocco is one of the most original Mediterranean countries in terms of bioclimate, morphology, vegetation, and fauna, with its extreme ecological diversity. With an overall endemism rate of 20%, Moroccan biodiversity is ranked second in the Mediterranean Basin, behind that of the Anatolian area (Turkey) [106]. The country's diverse bioclimates and natural environments foster rich and varied ecosystems, including thousands of invertebrates, approximately 550 species of vertebrates, and more than 4,000 vascular plants (Agence Nationale des Eaux et Forêts). Moroccan forests, which cover approximately 13.5% of the national territory, are a cornerstone of this biodiversity. These forests, ranging from semi-arid to humid bioclimatic stages,

3.1. Maintaining Biodiversity and Protected Areas in Morocco

are home to a multitude of animals, including the striped hyena, wild boar, panther, golden jackal, clawed mouflon, and different bird, reptile, and amphibian species [10, 2, 3]. Despite their ecological and socio-economic importance, Moroccan natural resources are increasingly threatened by climate change and human activities [77]. This situation necessitates robust conservation efforts.

Morocco is establishing a system of protected areas, which include distinctive ecosystems indicative of the biological richness of the nation, in an effort to preserve and promote this national heritage. The argan tree, Atlas cypress, and Moroccan fir are just a few examples of the rare or vulnerable plant species that may be found in these protected regions, which are distinguished by their rich flora [24].

By designating sites of biological and ecological significance, Morocco has put into practice a sustainable development strategy that aims to protect biological diversity and advance socioeconomic development [95]. The government has recognized 154 of these locations, created 10 national parks, and conserved a number of wetlands, including 38 biological or nature reserves that are Ramsar sites. [23, 2].

3.1.1 Sites of Biological and Ecological Interest (SIBE)

In Morocco, conservation efforts involving a variety of natural environments depend heavily on the identification and evaluation of Sites of Biological and Ecological Interest (SIBE). The SIBE network includes all types of natural ecosystems, with 85% of these ecosystems represented within national and natural parks. These sites are categorized based on their biodiversity significance and the urgency of degradation processes to prioritize actions for classification and protection as parks or reserves [2]. Ecosystems constantly change around a fragile equilibrium, where species move, appear, and disappear. However, human actions have greatly accelerated these processes, leading to the sudden disappearance of many species and disrupting the balance of ecosystems, ultimately impoverishing the natural heritage. The network operation between protected areas ensures biodiversity conservation at the national level [41].

- **Wetland Conservation and Ramsar Sites**

A framework for the rational use and national and international protection of wetlands is provided by the Ramsar Convention. This international treaty was

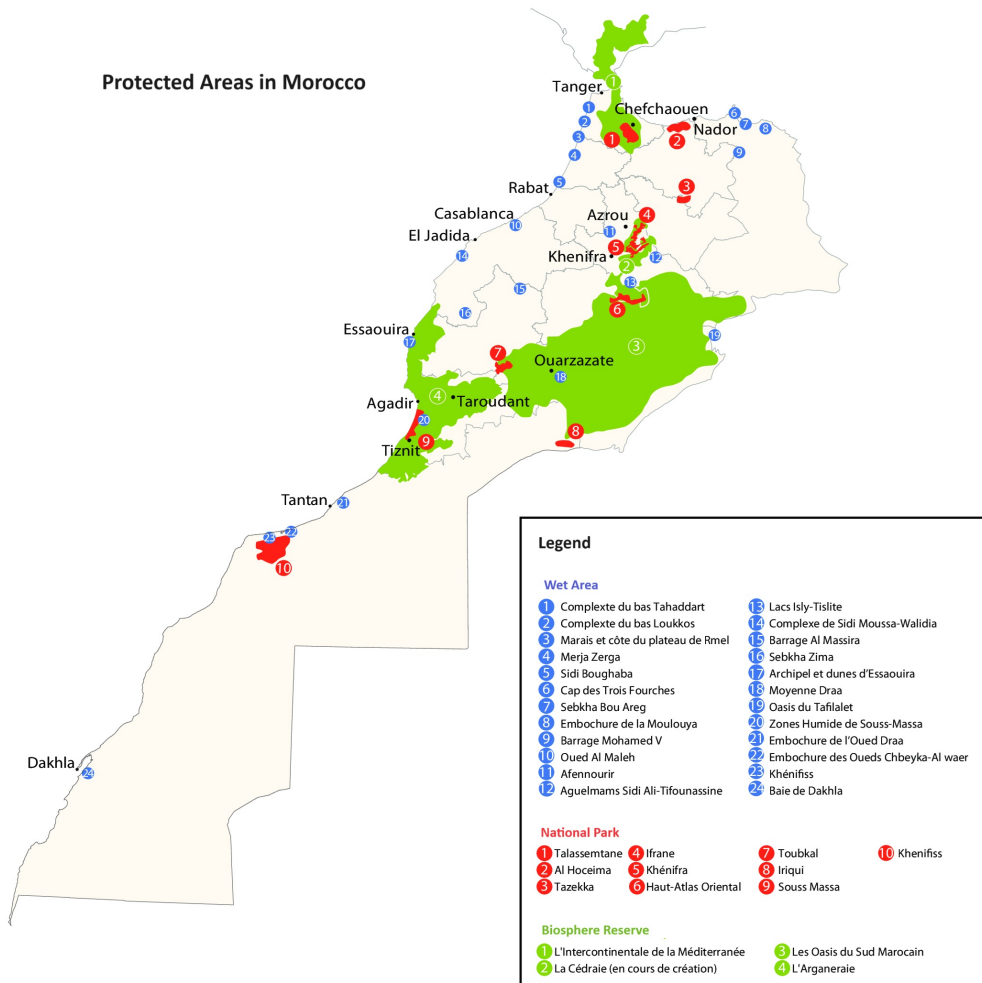


Figure 3.1: Map of Protected Areas in Morocco (Adapted from <https://bit.ly/4iNyPo0>)

ratified in 1971 and has been in effect since 1975 (Department of Water and Forests, 2019). Morocco, a Ramsar member since 1980, has developed tools for the sustainable management of its natural resources, identifying 84 wetlands for adequate management by 2020. Under the Ramsar Convention's strategic plans, the Department of Water and Forests has launched projects to enhance

3.2. UNESCO Programs In Morocco

wetland biodiversity conservation and promote sustainable, participatory local development [65].

Morocco has designated 38 wetlands, totaling nearly 320,000 hectares, as Ramsar sites. These wetlands are crucial for migratory birds travelling between Africa and Europe, serving as indispensable stopover points [2]

3.1.2 National Parks

A total of ten national parks were established in Morocco, which are another form of protected area in Morocco that play a crucial role in conserving biodiversity and ecosystems [42]. Where it is structured into several zones: certain spaces are completely protected (all human activity is prohibited), other zones allow controlled access, and finally, circuits are designed to encourage discovery tourism and recreational activities [2].

3.2 UNESCO Programs In Morocco

Morocco has actively participated in UNESCO's efforts to preserve and promote its rich cultural and natural heritage. The country features many Biosphere Reserves, Global Geoparks, and World History Sites, each playing a significant role in conserving biodiversity, geological history, and cultural relics. In Morocco, namely in the Arganeraie Biosphere Reserve, the UNESCO Man and the Biosphere Programme (MAB) seeks to balance resource management and conservation for sustainable development [30].

On the other hand, Spain stands out as an international reference for UNESCO-designated programs due to its active involvement and successful management of these initiatives. This section provides an overview of recent studies and the effects of various UNESCO designations in Morocco.

3.2.1 Biosphere Reserves in Morocco

- **The Arganeraie Biosphere Reserve**

First acknowledged in 1998, has been the subject of several research studies due to its unique argan forest, which is indigenous to Morocco's southwest

[56]. Studies have looked into conservation tactics, traditional agroforestry methods, and the contribution of argan oil production to the regional economy. The Argan ecosystem can be sustained by successfully combining traditional knowledge with contemporary conservation measures, as demonstrated by recent research like that conducted by [19]. Argan oil extraction has yielded noteworthy socio-economic advantages, furnishing local populations with a sustainable means of subsistence. In order to improve ecotourism operations, stakeholders in the area are essential in putting ideas into action. This highlights the distinctive contributions made by local actors in advancing sustainable development inside the reserve [94].

- **Oasis Biosphere Reserve of Southern Morocco**

This reserve has a variety of significant oases for the preservation of biodiversity and local livelihoods. The management of water resources, agricultural techniques, and the adaptability of oasis ecosystems to climate change have been the main topics of research. Additionally, studies have shown how over-extraction of groundwater and climate change pose dangers, emphasizing the significance of conventional water management systems and the need for integrated management techniques [26].

- **Mediterranean Intercontinental Biosphere Reserve**

This transboundary reserve between Morocco and Spain focuses on the conservation of Mediterranean ecosystems. Research has addressed cross-border conservation efforts, habitat connectivity, and the challenges of managing a transboundary reserve. The work of [62] has shown the benefits of cooperative management between Morocco and Spain, enhancing biodiversity conservation and promoting cultural exchange. The reserve serves as a model for international collaboration in biodiversity conservation.

- **The Atlas Cedar**

By protecting natural and cultural heritage, strive to maintain natural resources and advance sustainable development [122]. It includes the three national parks: Ifrane, the Eastern High Atlas, and Khenifra Park in an area of approximately 500 thousand hectares.

3.2. UNESCO Programs In Morocco

3.2.2 Global Geoparks in Morocco

The formation of Global Geoparks, which seek to encourage geotourism and the sustainable use of geological heritage, is a result of Morocco's distinctive geological features. Aligned with the UNESCO Global Geoparks Programme, these geoparks serve as platforms for safeguarding geological and cultural heritage, engaging local communities, and enhancing geotourism [87]. Through these efforts, in addition to safeguarding its geological treasures, Morocco promotes local businesses and raises public awareness of the value of conservation.

Morocco's main geoparks include:

- **M'Goun UNESCO Global Geopark**

One such geopark, the M'Goun Geopark, was recognized in 2014 and is situated in the Middle High Atlas area. Its landscapes, geological formations, and species diversity are enormous [130, 84]. By offering educational opportunities to tourists and integrating local people in conservation efforts, Geopark encourages both geotourism and sustainable development. According to research by [39], geotourism has the ability to stimulate regional economic growth while protecting the geological legacy of the region. The success of the geopark has been largely attributed to the participation of local people in its maintenance, which has fostered a sense of ownership and responsibility. The Ouzoud region, which is perfect for the growth of geotourism due to its rich natural and cultural heritage, is one of the potential geoparks to emerge in Morocco, but comprehensive studies and promotion of these areas are still lacking [84]. To address these challenges and gaps, focusing on conducting more studies, encouraging diverse geoparks, and enhancing management strategies is crucial to achieving sustainable development and preserving geological features in Morocco and beyond.

- **Jbel Bani Geopark**

The Géoparc Jbel Bani situated in the southern region of Morocco, holds significant importance in biodiversity preservation. This is evidenced by its efforts to present the diverse cultural and natural heritage through the discovery of ancient rock shelters containing paintings illustrating the local flora and fauna [97]. Furthermore, the park plays a role in preserving biodiversity by potentially serving as a location to trace ancient human migration routes. This facilitates the exchange of culture, beliefs, and ideas among various human populations [97]. Besides, the concept of conservation geography underscores the significance of incorporating geodiversity research into biodiversity conservation initiatives, emphasizing the necessity for a comprehensive perspective on comprehending and safeguarding natural resources [89]. The Géoparc Jbel Bani stands out as a prominent contributor to the conservation of biodiversity in the area, but

3.2. UNESCO Programs In Morocco

despite its rich geological and cultural significance, the park lacks recognition by UNESCO as a UNESCO Geopark [79].

3.2.3 World Heritage Sites in Morocco

Morocco provides several UNESCO World Heritage Sites, which serve as a testament to its deep history and culture. The Medina of Fez, which was officially listed in the year 1981, stands out for its intricate medieval architectural structures and dynamic cultural vibrancy, as acknowledged by UNESCO [7]. In a similar vein, the Medina of Marrakesh, a pivotal center for both economic and cultural activities since the year 1985, mirrors the enduring historical importance and distinctive architectural legacy of the city [8].

One noteworthy example of traditional earthen construction found in southern Morocco is the Ksar of Ait-Ben-Haddou, which has been formally acknowledged since 1987 [5]. Furthermore, the Historic City of Meknes, whose grand gates and sumptuous palaces present a great example of Islamic architectural achievement, was added to the esteemed list in 1996 [4]. In 1997, the Archaeological Site of Volubilis was declared a World Heritage Site by UNESCO. It serves as a powerful reminder of Rome's enduring influence over North Africa [1]. In addition, the Tétouan Medina, which is renowned for its unique Andalusian features, has been recognized as a World Heritage Site since 1997 [9]. Essaouira's Medina, historically known as Mogador, is equally important. It was inscribed in 2001 and provides insight into the city's past as a major seaport with a distinctive blend of architectural forms [6]. Recognized in 2004, the Portuguese City of Mazagan (El Jadida) is a remarkable exhibition of Renaissance military architecture tailored to the Moroccan climate [11].

Last one, Rabat's designation in 2012 as a Modern Capital and Historic City:

A shared heritage exemplifies a harmonious combination of contemporary urban design principles with a rich historical legacy of architecture [12]. When taken as a whole, these locations provide moving reminders of Morocco's rich and varied cultural past, significantly contributing to the world's cultural landscape.

3.2.4 Impact of UNESCO Designations in Morocco

Significant benefits have resulted from Morocco's classification as a Global Geopark, Biosphere Reserve, and World Heritage Site:

- **Environmental Conservation**

Morocco has achieved significant strides in the field of environmental conservation by putting conservation measures in place to protect its unique biodiversity and geological heritage. In order to evaluate natural ecosystems and identify sites that are important for biology and ecology, the country has implemented a thorough Master Plan for Protected Areas [21].

- **Economic Benefits**

Local communities now have more economic prospects thanks to promoting sustainable tourism in these locations. Tourists have improved local economies, produced employment, and given traditional crafts and goods a market [86].

- **Cultural Preservation**

Morocco's cultural legacy has been better preserved because of UNESCO designations, which guarantee the maintenance of historical places and customs for the next generations. As a result, pride in Morocco's rich cultural heritage and national identity has grown [36] (UNESCO, 2023).

- **Education and Awareness**

Public awareness campaigns and educational initiatives are crucial in Morocco to raise awareness of the need to protect cultural resources. Local communities and tourists have benefited from this by developing a culture of environmental care and cultural appreciation [25].

3.3 Initiatives on UNESCO-designated programs in Morocco

- **Proposal to Designate the Ghomara Coast and Talassemrane National Park as a Global Geopark**

Aoulad-Sidi-Mhend et al. in their study of [23] have released a new plan for the preservation and sustainable use of the geological heritage of Talassemrane

3.3. Initiatives on UNESCO-designated programs in Morocco

National Park and Ghomara Coast (TNP-GC) in northern Morocco. This proposal aims to formally include the latter area in the Global Geoparks Network in an effort to promote the region's significant geological and environmental heritage globally. The Talassemrane National Park and Ghomara Coast (TNP-GC) in northwest Morocco is renowned for its remarkable natural legacy, even though its geological heritage was not fully explored until recently. Since October 2006, it has been a part of the Intercontinental Biosphere Reserve of the Mediterranean Sea. The region's geological heritage, which extends from the Paleolithic to the Quaternary and is influenced by the Hercynian and Alpine mountains, includes unique formations such as the Rif Mountain range. The geopark development aims to achieve a balance between environmental conservation and scientific, educational, and tourism uses, promoting sustainable development and seeking formal integration into the UNESCO global geopark network to gain international recognition and support [23].

- **Initiative for Tata Geopark**

The initiative to create the Tata Geopark in Morocco stems from the rich geodiversity and geological heritage of the Tata Province in the western part of the Anti-Atlas [33]. This region, affected by various geodynamic events and long periods of erosion, offers numerous geomorphological sites of scientific and landscape interest, making it ideal for geotourism and sustainable development projects [34]. The Anti-Atlas region, including Tata, has been identified as having significant geoheritage features that could function as Geosites of Special Scientific Interest (SSSI) or even as geoparks, promoting research, education, and geotourism [55]. The geological and cultural heritage of the Taguelft syncline, south of Béni Mellal city, also contributes to promoting geotourism and sustainable geoconservation efforts [83]. Additionally, the Bani Geopark in southern Morocco showcases heterogeneous ductile deformation and Hercynian folding phases, providing scientific, aesthetic, and educational value for geotourism purposes [34].

3.4 Review of Protected Areas in Spain

The protected areas in Spain are governed by international instruments under Law 42/2007 on Natural Heritage and Biodiversity, which defines these areas as natural spaces identified in accordance with international conventions ratified by the Spanish Government. These include:

- a) Wetlands of International Importance under the Ramsar Convention.
- b) Natural Sites as World Heritage Sites by UNESCO.
- c) Protected Areas under the OSPAR Convention for the Marine Environment of the Northeast Atlantic.
- d) Specially Protected Areas under the Convention for the Protection of the Seas and Coasts of the Mediterranean.
- e) Geoparks and Biosphere Reserves declared by UNESCO.
- f) Biogenomic Reserves under the Council of Europe. The organization of these areas is strongly based on the National Strategic Plan for Natural Heritage and Biodiversity, which has been systematically drawn up in alliance with the regional authorities [107].

3.4.1 Biosphere Reserves in Spain

Creating biosphere reserves in Spain represents a significant advance in the global integration of environmental conservation and sustainable development. The concept of biosphere reserves began at the Intergovernmental Conference of UNESCO in Paris in 1968 and became an integral part of the Man and the Biosphere Programme launched in 1971. This program creates innovative models for the sustainable use and conservation of natural resources [14, 120, 73, 27, 85].

- The significant phases in the progression of biosphere reserves in Spain Spain declared in 1977 its first two Biosphere Reserves, Grazalema (Andalusia) and Ordesa-Viñamala (Aragón). Spain's network of Biosphere Reserves expanded significantly, reaching 14 reserves by 1995 and 52 reserves by 2021, making Spain one of the leading contributors to the World Network of Biosphere Reserves and leading examples such as Doñana (1980), Sierra Nevada (1986), and Urdaibai (1984) [121].

In 1995, Spain adopted the Seville Strategy and Framework for Biosphere Reserves. These frameworks emphasize the synthesis of conservation, development, and logistical

3.4. Review of Protected Areas in Spain

support, positioning biosphere reserves as models of sustainable practices. In addition, Spain has implemented these frameworks through national policies, particularly Law 42/2007, which aligns the management of biosphere reserves with the objectives of UNESCO (7; 8). Galicia, which includes six biosphere reserves that cover 21% of the region's total area (610,000 hectares), plays a vital role in the national network of biosphere reserves. In 2021, Galicia's commitment to the MAB Program culminated in the declaration of the Ribeira Sacra Biosphere Reserve, which integrates ecological conservation with the preservation of cultural landmarks such as monasteries and terraced vineyards [110].

- Global and National Collaboration Spain's biosphere reserves are incorporated within the World Network of Biosphere Reserves and the Spanish Network of Biosphere Reserves (Red Española de Reservas de Biosfera—RERB), with the collaboration of the Autonomous National Parks Organism (Organismo Autónomo Parques Nacionales—OAPN). Galicia further coordinates efforts through the Galician BR Network, facilitating regional collaboration and sharing best practices. Spain has participated in transnational initiatives such as the Ibero-American MAB Network, which promotes cooperation among BRs in Latin America and the Caribbean [121].

The Spanish government highlights the integration of environmental protection, sustainable development, and scientific education within its biosphere reserves, facilitating partnerships between local communities, stakeholders, and academic organizations to achieve participatory resource governance. For example, the Doñana Biosphere Reserve stands as a prominent example linking agriculture, tourism, and environmental protection.

3.4.2 Review of UNESCO Geoparks in Spain

- Geoparks in Spain

Spain is committed to preserving geology and sustainable development and has several Geoparks, the most prominent of which is the Courel Mountains Geopark in Galicia. Managed by the Montañas do Courel Association, it covers an area of over 5.7 million hectares. They show wide geographical diversity, such as the Campodola-Leixazós, a geological anticline considered a natural monument in 2012 (Decree 120/2012). The recognition of Montañas do Courel as a UNESCO

Global Geopark represents the country's efforts to comply with geoparks within the national legislative frameworks [47].

- Two Legal Frameworks in Spain

UNESCO Global Geoparks in Spain are classified as Protected Areas by International Instruments, according to Law 42/2007. This legislation, besides Galician Law 5/2019, primarily addresses the declaration procedures for geoparks, leaving gaps in their operational and legal frameworks. These shortcomings pose challenges for effectively implementing Geopark objectives [47].

- Three Global and National Collaborations

The Spanish Geoparks are firmly established in the International Geosciences and Geoparks Programme (IGGP), which unequivocally promotes cooperation between areas of great geological interest. In this framework, the Spanish Geoparks are a key participant in the GGN network, participating in knowledge exchange, collaborative projects, and community development initiatives. This strategic partnership not only supports local conservation efforts but also plays a vital role in formulating global strategies dedicated to conserving geodiversity and promoting sustainable development.

- The Role of Geoparks in Spain

Spain has expertly taken advantage of its diverse geological landscape to create geoparks for environmental conservation, education, and local economic advancement. Geoparks in Spain often employ a community-driven, “bottom-up” strategy for conservation, ensuring the active participation of local communities and local people in management and decision-making processes. These parks unite geographic diversity with diverse elements of natural and cultural heritage, enhancing public understanding of critical issues such as climate change, sustainable resource management, and geological risks.

CONCLUSION

3.4. Review of Protected Areas in Spain

Complementing the literature review on the three UNESCO-designated sites in Morocco, we identified a notable gap, as existing studies only focus on evaluating individual natural sites in isolation, rather than examining them in a broader, comparative, or integrative context.

The works up-to-date do not generally provide studies analyzing the reasons behind Morocco's lack of UNESCO-designated sites or approaches for new initiatives to gain UNESCO recognition. Therefore, our approach will emphasize the theoretical and practical frame of reference of the three UNESCO-designated sites, which stakeholders and the government can further use. As we move from the literature review to the contributions of this study, it is important to place our research in the context of the identified gaps and challenges.

This study employs a comparative approach between Morocco and Spain, focusing on the significant differences in the documentation and public awareness of UNESCO-designated sites in both countries. Spain, as Morocco's neighboring country, serves as a successful model due to its extensive number of UNESCO-recognized sites and effective conservation strategies. By examining these contrasts, this study offers a unique analysis of the effectiveness and impact of UNESCO's programs in Morocco and Spain, aiming to enhance knowledge and improve conservation practices.

Therefore, we will concentrate on a detailed examination of these distinctions in the upcoming chapter, paying particular attention to how Spain's methods and ideas might influence and even enhance conservation initiatives and public participation in Morocco.

Chapter 4

Methodology

(No publication has been directly derived from this chapter)

4.1 Introduction

In order to understand the disparity in UNESCO-designated sites between Morocco and Spain, this study adopts a qualitative, comparative, and multi-method research design. The qualitative approach was selected because it allows for in-depth exploration of cultural, institutional, and governance complexities, as well as the lived experiences of stakeholders involved in heritage management. The comparative perspective is essential to highlight differences and similarities between Morocco and Spain, two geographically close yet institutionally distinct contexts. Finally, the multi-method design—combining interviews, document analysis, and field observations—ensures that findings are grounded in diverse sources of evidence.

This combination provides both validity and contextual richness, offering a solid foundation for the analysis and recommendations presented in the following chapters.

4.2 Research Design

This study is especially well-suited to qualitative research as it thoroughly examines the varying subjective experiences and viewpoints of those engaged in heritage protection. This method must capture the subtleties of cultural identity, historical relevance, and sociopolitical processes that affect UNESCO site designations. Merely

4.3. Methods Overview

employing quantitative techniques would be inadequate in comprehending the intricate interactions among these variables.

The study's emphasis on comprehending the differences in UNESCO site designations between Morocco and Spain justifies the use of a comparative analytical paradigm. This approach makes it possible to pinpoint the issues that each nation has as well as the shared difficulties that they face, which serve as a foundation for developing focused suggestions. Comparative analysis works especially well at showcasing lessons and best practices that are transferable to other situations.

4.3 Methods Overview

The desire to have a thorough contextual knowledge of the elements impacting the identification and preservation of UNESCO-designated sites in Morocco and Spain guided the selection of research techniques for this project. Due to the intricacy of the study topic, which encompasses historical, cultural, environmental, and policy-related components, a qualitative research technique was determined to be the most suitable. The three approaches that were selected of interviews, document analysis, and on-site assessments provide a full understanding of the subject matter through complementary perspectives.

- **Interviews:** Interviews were chosen as the major technique due to their ability to provide direct contact with important stakeholders such as politicians, heritage specialists, and members of the local community. This approach is essential when it comes to obtaining expert views and experience information that cannot be obtained from other data sources. Rich, in-depth information from interviews is used to better understand the goals, difficulties, and tactics of historic conservation initiatives in Morocco and Spain.

- **Document Analysis:**

Knowing the formal frameworks and historical settings that have influenced heritage conservation techniques in both nations requires analyzing historical archives, scholarly publications, policy papers, and UNESCO reports. The policies and institutional frameworks supporting UNESCO site nominations may be critically examined using document analysis, which provides insights into how

these components have changed over time and how they affect contemporary practices.

- **On-site Assessments (Fieldwork):** Assessing specific UNESCO-designated sites on location allows for direct observation of the natural and cultural settings under study. This approach is justified because it evaluates the site management's practical aspects, such as community engagement, tourism benefits, and conservation practices. In order to provide a comprehensive review, on-site evaluations provide insightful data that supplements the information gleaned from papers and interviews.

4.3.1 Interviews

- Purpose and Scope

Because of their capacity to offer comprehensive, qualitative insights that are critical for comprehending the many variables impacting the identification and protection of UNESCO-designated monuments in Morocco and Spain, interviews were chosen as a primary research technique for this study. Interviews provide a more detailed examination of individual experiences, professional viewpoints, and the socio-political context around heritage conservation than quantitative data, which may only provide general trends and patterns. This approach is especially useful for learning about the goals, difficulties, and viewpoints of those who are directly involved in or impacted by choices made about heritage management. Although the number of interviewees was limited to four, this selection follows a qualitative and purposive sampling strategy, aiming to capture the diversity of perspectives most relevant to the research objectives. The goal was not statistical representativeness but rather the depth and richness of insights from key stakeholders with direct experience in heritage management. This qualitative scope ensures that the findings reflect a broad range of institutional, technical, and community viewpoints. The complete transcripts and summaries of all interviews are included in the Appendix (Appendix A) to ensure transparency and to allow readers to consult the primary qualitative material.

4.3. Methods Overview

- Types of participants

In total, four semi-structured interviews were conducted with key participants in Morocco and with experts working at the Mediterranean scale. These included institutional representatives, heritage specialists, and community leaders directly involved in heritage conservation and management. Among them was the Director of IUCN Centre for Mediterranean Cooperation, whose insights extended beyond the Moroccan context to include experiences and lessons from Spain and other Mediterranean countries. This combination of local and regional perspectives strengthened the comparative dimension of the study, allowing for a more comprehensive understanding of governance and conservation dynamics across both contexts. A wide range of individuals essential to the preservation of cultural heritage in both nations are among the intended participants for these interviews. The following categories apply to these participants:

- **Policymakers:** Government employees and delegates in charge of the departments responsible for planning policies related to cultural and natural heritage. Their perspectives are invaluable for knowledge of the institutional and legislative contexts guiding Morocco's conservation efforts and UNESCO site nominations.

Interview Case: An interview was conducted with Mr Jamal Din Derder, Head of the Forestry Engineering Section at (Agence Nationale des Eaux et Forêts de Tétouan). He provided insights into the challenges Morocco faces in gaining UNESCO recognition for its natural sites. According to Mr. Derder, the country's underrepresentation is not due to a lack of valuable heritage, but rather to institutional and technical limitations, such as weak inter-agency coordination and insufficiently developed nomination dossiers. His perspective reinforced the importance of integrated management strategies and multi-stakeholder collaboration in improving heritage recognition and conservation.

- **Heritage Experts:** Academics, professionals with experience in heritage management, and historians. The insights of these specialists into the historical and cultural value of locations, as well as on sustainable tourism and conservation, best practices are invaluable.

Interview Case: To gain deeper insights and enhance the comparison, we interviewed Dr. Maher Mahjoub, who leads the International Union for Conservation of Nature's (IUCN) Centre for Mediterranean Cooperation, and provided a regional perspective that linked both Morocco and Spain within the broader Mediterranean framework. Dr. Mahjoub shared valuable insights drawn from his extensive experience in fostering North-South Mediterranean cooperation to strengthen biodiversity conservation and environmental governance across the region. He emphasized that the Mediterranean is a biodiversity hotspot but also highly vulnerable to climate change, particularly on its southern shores, where natural sites remain underrepresented on the UNESCO World Heritage List. Dr. Mahjoub highlighted Spain's leadership and political will in expanding its protected areas network and integrating conservation with community participation and sustainable tourism, an approach from which Morocco could benefit. He also underlined IUCN's ongoing efforts to support conservation, biodiversity protection, and ecosystem restoration through multi-country programs. Regarding the proposed Rif Geopark, he encouraged clear communication with local communities and stakeholders to foster understanding, ownership, and long-term engagement in conservation-based development.

- **Local Stakeholders:** Leaders in the community and locals who are either directly involved in or affected by UNESCO site management. Their perspectives are crucial for conveying the day-to-day realities of historic protection, such as community involvement, financial gains, and difficulties with site upkeep and tourists. Through interaction with these diverse people, the interviews seek to obtain a thorough knowledge of the elements that lead to Morocco and Spain's differing UNESCO classifications. In the context of UNESCO-designated sites, the qualitative information gathered from these interviews will be crucial in developing suggestions for improving heritage protection tactics, encouraging cross-cultural interaction, and supporting sustainable development.

Interview case: Rural Women and Cooperative Leadership in the Rif A particularly illustrative case was that of Mme Hafsa Ait Aissa, Head and Coordinator of Women's Rural Cooperatives in the Rif Region. Mme Hafsa is responsible for managing a regional centre where women's cooperatives bring

4.3. Methods Overview

their locally produced goods often derived from traditional knowledge and local natural resources for packaging, promotion, and sale. In addition to overseeing the center's operations, she regularly visits production sites, organises meetings, and coordinates training and visibility efforts for the cooperatives under her supervision.

In her interview, Mme Hafsa emphasized that rural women in the Rif possess significant energy and a strong work ethic. Still, their initiatives often remain scattered due to a lack of institutional support. To address this, the Agricultural Institute in the region initiated targeted training programs specifically designed to empower women and prepare them for participation in the job market. One key area of development involved the sustainable use of local biodiversity, especially medicinal and aromatic plants. Customers are invited to visit cooperative workshops to observe the production process firsthand, which not only builds consumers' confidence but also increases transparency and visibility for the products. This strategy enhances direct marketing and contributes to trust in the authenticity of local goods.

Mme Hafsa also highlighted the ecological richness of the Beni Quraish area, where the cooperatives are active, and how this natural heritage has been increasingly linked to economic empowerment. By integrating women into a localized production and marketing system rooted in sustainability and transparency, the initiative serves as a model of participatory rural development. Her testimony reflects a comprehensive development approach that aligns with the goals of this study: connecting natural resource conservation with community empowerment, particularly through gender-sensitive strategies that strengthen the role of women in local heritage economies.

In addition, interviews were conducted with some local residents from the countryside, who preferred to remain anonymous for privacy reasons. These individuals provided valuable, first-hand insights into the daily reality of communities living near potential UNESCO sites. Their perspectives highlighted the opportunities and difficulties local people face in balancing traditional livelihoods and heritage conservation efforts. These testimonies complement institutional and expert perspectives by grounding the analysis in the lived experiences of those directly

affected by heritage management practices.

- Interview protocol and process

Development of Interview Protocols

To guarantee that the information gathered would be pertinent, thorough, and consistent across all interviews, the creation of interview procedures was an essential first step. The procedures were created with the study's goals in mind, emphasizing the major ideas found in literature as well as the research questions that direct the investigation. The interview questions covered a wide range of subjects, including the historical background of UNESCO site nominations, the efficacy of conservation policies, the importance of community involvement, and the influence of sociopolitical factors on heritage preservation. The questions were designed to elicit thoughtful, in-depth answers from participants.

The interview techniques went through a phase of pilot testing to guarantee the correctness and dependability of the data. In this stage, a few people with pertinent experience were questioned, and their answers were used to refine the questions, clarify wording, and improve the overall flow of the interview. This iterative process helped to develop a robust set of interview protocols that could be consistently applied across different participants and settings.

Description of the Interview Process

- **Setting:** The interviews were conducted in settings mainly and sometimes onsite that were comfortable and convenient for the participants, ensuring a conducive environment for open and candid discussions. Depending on the participant's preference and location, interviews were held in their offices, via telephone, or through video conferencing platforms. These flexible arrangements helped to accommodate participants' schedules and geographical constraints, thereby maximizing participation.

- **Tools Used:** A combination of digital recording devices and note-taking tools was employed during the interviews to ensure accurate data capture. For in-person interviews, a high-quality audio recorder was used to record the conversation, while the interviewer also took notes to capture non-verbal cues and immediate reflections. In the case of telephone and video interviews, the recording was conducted using built-in recording features of the respective platforms, with additional manual note-taking.

4.3. Methods Overview

Transcription software was later used to convert the audio recordings into text for detailed analysis.

- **Duration:** The interviews were designed to last approximately 20-30 minutes, depending on the depth of discussion and the availability of the participant. This duration was deemed sufficient to cover all the key topics without imposing too much on the participants' time. In some cases, interviews extended beyond the initial time-frame due to the participant's interest in further discussing certain topics. Flexibility in duration was maintained to allow for the exploration of particularly rich insights when appropriate.

By carefully designing and implementing the interview process, this study ensured that the data collected would be both high-quality and relevant to the research objectives. The structured yet flexible approach allowed for the collection of rich qualitative data, which is essential for understanding the complex factors influencing UNESCO site designations in Morocco and Spain.

Data Collection and Management

Techniques for recording, transcribing, and storing interview data To ensure the accuracy and reliability of the data collected during the interviews, a systematic approach was employed for recording, transcribing, and storing the information:

- **Recording:** All interviews carried out in French were recorded using a highquality audio recording on a smartphone or online recording on video conferencing platforms (for remote interviews). During in-person interviews, a second backup recording device was also used to avoid the risk of any technical problems.

- **Transcribing:** The recorded interviews, which were carried out in French, were transcribed using Microsoft Office Word (transcribe function). This process involved converting the audio recordings into text, ensuring that every word spoken by the participants was correctly captured. The transcripts were then reviewed and edited to correct any errors and ensure clarity while maintaining the original meaning and context. Transcriptions were completed promptly after each interview to maintain the accuracy of the data.

- **Storing:** The interview data, including audio recordings, transcriptions, and notes, were securely stored in encrypted digital formats. To prevent data loss, data was backed up regularly to multiple secure locations, including cloud storage services with strong encryption protocols. Access to the data was restricted to authorized

researchers involved in the study, ensuring that the integrity and confidentiality of the information were preserved.

- Translation: Almost all the interviews with stakeholders and local people were conducted in Arabic or the Moroccan dialect (Darija). As a result, I had to translate all the interviews into both French and English. In some cases, I needed to adjust certain words and phrases to ensure accurate meaning, as they were specific to the local dialect.

Measures Taken to Ensure Confidentiality and Ethical Considerations

To uphold the ethical standards of research and protect the privacy of the participants, several measures were taken:

- Prior consent Before each interview, participants were provided with a detailed explanation of the research objectives, the purpose of the interview, and how their data would be used. Consent was obtained verbally, and participants were assured that their participation was voluntary. They were also informed of their right to withdraw at any time without any consequences.

- Confidentiality: Participants' confidentiality was a top priority throughout the research process. Personal identifiers were removed from transcripts and replaced with anonymized codes. In any report or publication of research findings, care was taken to present data in a way that protected the identity of participants.

4.3.2 Document Analysis

Selection of Documents

Types of documents analyzed: Historical archives, Policy documents, UNESCO reports, and Legal Frameworks.

The document analysis component of this study involved a thorough examination of various types of documents that are directly relevant to understanding the disparity in UNESCO-designated sites between Morocco and Spain. The following types of documents were selected for analysis:

- Historical Archives: These include historical records, archival documents, and primary sources that provide insights into the historical context and evolution of heritage conservation practices in both Morocco and Spain. The archives

4.3. Methods Overview

reviewed include those maintained by national heritage institutions, libraries, and historical societies.

- **Policy Documents:** Policy papers, governmental reports, and strategic plans related to heritage conservation were analyzed to understand the legal and institutional frameworks governing UNESCO site nominations in each country. These documents reveal the priorities, goals, and challenges faced by Morocco and Spain in the preservation and promotion of their cultural and natural heritage.
- **UNESCO Reports:** Official reports and publications from the UNESCO website were examined to assess the criteria, processes, and outcomes of site designation. These include periodic review reports and site evaluation documents, which provide a broader context for how Morocco and Spain fit into the global framework of UNESCO-designated sites, considering updates to the status of World Heritage.
- **Legal Frameworks:** Several legal texts, including national heritage laws, international treaties, and UNESCO conventions ratified by Morocco, were analyzed to understand the regulatory environment that affects the identification and management of heritage sites. These legal frameworks provide the basis for assessing the compliance of heritage conservation efforts.

Criteria for Document Selection and Relevance to the Research Problem, and documents were selected according to specific criteria to ensure that the analysis was relevant and comprehensive:

1. **Relevance to the research objectives:** The selection of documents was based on their clear connection to the study's main research concerns. Every paper had to include insightful information about the elements affecting Morocco's and Spain's UNESCO site candidacy, recognition, and conservation.
2. **Authenticity and credibility:** The study contained only papers that were regarded as reputable and authentic. This required confirming the origin of every document and webpage to ensure that they were created by reputable organizations, governmental entities, or subject matter experts. Each document's information was also evaluated for trustworthiness.

3. **Temporal coverage:** The chosen materials encompassed a wide temporal range to encompass both historical and modern viewpoints. The long-term perspective of heritage protection was offered by historical archives, and we also consulted UNESCO reports and new policy papers.
4. **Comparative potential:** The chosen documents aim to provide a more straightforward comparative study between Morocco and Spain. This involved choosing texts that discussed comparable topics or problems in both nations so that they could be directly compared in terms of cultural preservation. For instance, to compare Morocco's and Spain's approaches and management practices regarding UNESCO site nominations, policy papers and proposal files from both nations were examined.
5. **Accessibility of documents** Key criteria were also document availability and completeness. Priority was given to fully accessible documents. Where documents were incomplete or inaccessible, alternative sources were searched to ensure that the analysis was comprehensive and representative.

Through careful selection and analysis of these documents, the study was able to draw meaningful connections between historical contexts, policy frameworks, and the current state of recognition of UNESCO sites in Morocco and Spain. This careful analysis of the documents provided a baseline layer of data that complemented the other research methodologies used in the study.

4.3.3 On-site Assessments (fieldwork)

Purpose

Morocco represents a unique case of UNESCO cultural heritage preservation due to its rich cultural heritage and diverse landscape. Visiting the sites in person provided invaluable insights that could not be gathered through secondary sources alone. Field assessments were essential to assess how the theoretical frameworks for heritage conservation are implemented in practice. Fieldwork allowed for observation of how local communities, heritage experts, and government bodies manage sites, particularly in the face of limited resources. The field assessments aimed to provide a detailed understanding of the practical realities surrounding the conservation and

4.3. Methods Overview



Figure 4.1: During field observations at the Beni Bouzra Massif, a key geosite in the proposed Rif Geopark framework.

management of UNESCO-designated sites in Morocco. The purpose was to observe first-hand the challenges, successes, and operational procedures involved in heritage conservation. Complementing the other research methodologies stated above, this fieldwork was crucial.

Criteria for site selection:

- **Conservation Challenges:** Sites that faced notable conservation challenges, such as environmental pressures or resource limitations, were selected to assess how Morocco addresses these issues in its heritage management
- **Geographical and Typo-logical Diversity:** The selected sites spanned both urban and rural settings and included cultural, natural, and mixed heritage sites. This provided a broad perspective on the various contexts in which heritage conservation occurs in Morocco.

Data Collection Techniques

During the on-site assessments in Morocco, a mix of qualitative methods was used to gather detailed information about each heritage site:

- **Observation:** Direct observation was employed to assess the physical condition of the sites, conservation efforts, and interactions between the site, visitors, and the local community. This provided real-time insights into the management and challenges of these sites.
- **Photography:** Photographs were taken to document current site conditions and environmental settings. These photographs served as a visual record, complementing the written notes and highlighting key issues.
- **Local Interviews:** Informal interviews were conducted with site managers, sometimes with conservation workers and locals, and rarely with tourists on site. These discussions provided valuable and diverse perspectives on conservation practices, the impact of tourism, and community engagement.

CONCLUSION In summary, the methodology adopted for this research integrates qualitative approaches—including interviews, document analysis, on-site assessments, and comparative analysis—to capture the complexity of factors influencing UNESCO site recognition in Morocco and Spain. These methods were chosen to provide a nuanced understanding of historical, institutional, and sociocultural dynamics, while also addressing gaps in transparency and community engagement. By triangulating data from diverse sources and stakeholders, the study

4.3. Methods Overview

ensures both depth and contextual richness, laying a strong foundation for the analysis and recommendations that follow.

In the next chapter, the results of this research are presented and discussed in depth, highlighting the disparities in UNESCO site recognition between the two countries. The findings are further used to propose the creation of a new UNESCO Global Geopark in northern Morocco.

Chapter 5

Results and Discussion

(This chapter is based on original research that is currently being prepared for publication in an international peer-reviewed journal)

This chapter presents the results of a comparative study between UNESCO-designated sites in Morocco and Spain, offering an integrated discussion of the findings. The analysis draws on a combination of quantitative data, historical records, policy documents, and interviews with key stakeholders to explore the disparities in site designation, management structures, and community engagement in both countries. Rather than separating results from interpretation, this chapter integrates both elements to provide a deeper and more cohesive understanding of the underlying factors that influence heritage recognition and conservation effectiveness.

In the second part of the chapter, based on the insights gained from the comparative analysis, a proposal is made for the creation of a new UNESCO Global Geopark in the Rif region of northern Morocco. The area's exceptional geodiversity, biodiversity, and cultural richness are highlighted, along with key sites and potential benefits. The discussion also addresses the challenges associated with such a nomination and the steps required to achieve international recognition and support sustainable regional development. This integrated approach allows for both critical reflection and constructive projection of future strategies in Moroccan heritage conservation.

5.1. Analysis of Disparity in UNESCO Designated Site

5.1 Analysis of Disparity in UNESCO Designated Site

5.1.1 Different scales of comparison of UNESCO Designated Sites in Morocco and Spain

Presentation of Data and Analysis

A clear disparity emerges between Morocco and Spain when examining the number of UNESCO-designated sites (Table 5.1). Since UNESCO annually updates the official lists of World Heritage Sites, Biosphere Reserves, and Global Geoparks, the data presented in this thesis were standardized using the most recent available information up to the year 2022, to ensure consistency and comparability between Spain and Morocco. As of 2022, Spain has been recognized for 49 UNESCO World Heritage Sites, encompassing both cultural and natural sites. Additionally, Spain has established 53 UNESCO Biosphere Reserves and 15 UNESCO Global Geoparks, demonstrating a comprehensive commitment to cultural, environmental, and geological conservation.

In contrast, Morocco has 9 World Heritage Sites, primarily cultural in nature, alongside 4 Biosphere Reserves and only 1 Global Geopark. This comparison highlights the significant gap between the two countries in terms of UNESCO recognition across different heritage categories, which prompts a deeper exploration of the factors influencing these outcomes.

Table 5.1: Proportional Distribution of UNESCO Designated Sites in Spain and Morocco - 2022

Category	Spain (Count)	Spain %	Morocco (Count)	Morocco %
World Heritage Sites	49	43%	9	64,29%
Biosphere Reserves	53	47%	4	28,57%
Global Geoparks	15	10%	1	7,14%

- Illustrated comparison of the differences in designation between the two countries:

- Comparison by category: The disparity in the number of UNESCO-recognized sites highlights the differences in heritage conservation priorities, resources, and historical contexts between the two nations. The following analysis examines these differences in greater detail across various comparison scales. The bar chart shows a clear difference in focus between the two countries, with Spain

having a more diverse representation across cultural, natural, and mixed sites. In contrast, Morocco's recognized sites are predominantly cultural, as shown in Figure 5.1.

Concentration in Biosphere Reserves for Spain: With 53 Biosphere Reserves, Spain is highly recognized for its environmental conservation, whereas Morocco lags far behind, signaling potential gaps in natural heritage preservation.



Figure 5.1: Global Distribution of UNESCO World Heritage Sites with Focus on Spain and Morocco. (Ref: UNESCO PAGE)

Gap in Global Geoparks: The extreme difference in Global Geopark recognition (15 vs. 1) shows that Morocco has not capitalized on its geological heritage to the same extent as Spain.

- Comparison by percentage: The percentage comparison shows that Spain has a more balanced distribution across categories, while Morocco's UNESCO recognitions are heavily concentrated in cultural World Heritage Sites. What is

5.1. Analysis of Disparity in UNESCO Designated Site

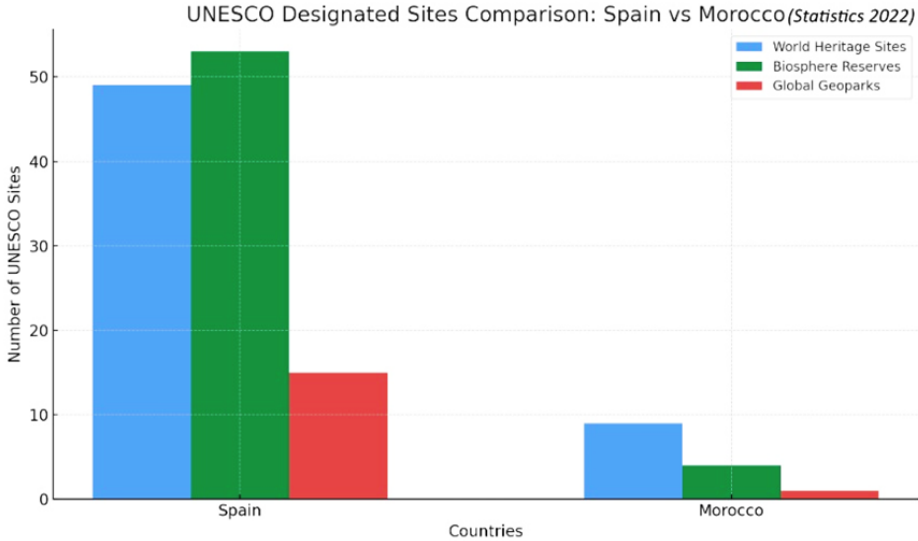


Figure 5.2: Number of UNESCO Sites in Spain and Morocco by Category

most notable here is the share of each category in the total UNESCO designations for both countries. A percentage value in Table 5.1 can show which categories dominate each country.

Figure 5.2 shows the percentage contribution of each category within the total UNESCO programs for both countries. The pie chart in Figure 5.3 illustrates the disparity in UNESCO designations between Morocco and Spain, highlighting differences in their focus on World Heritage Sites, Biosphere Reserves, and Global Geoparks. In Morocco, 64.3% of UNESCO sites are World Heritage Sites, indicating a strong emphasis on cultural heritage, while Biosphere Reserves and Global Geoparks are less represented. This suggests a need for greater recognition of natural and geological heritage. In contrast, Spain displays a more balanced distribution: 41.9% of the World Heritage Sites, 45.3% of Biosphere Reserves, and 12.8% of Global Geoparks, reflecting a comprehensive approach to heritage conservation. This comparison underscores the potential for Morocco to expand its heritage portfolio by increasing nominations for Biosphere Reserves and Geoparks, thereby achieving a more diversified

UNESCO Designations in Morocco

UNESCO Designations in Spain

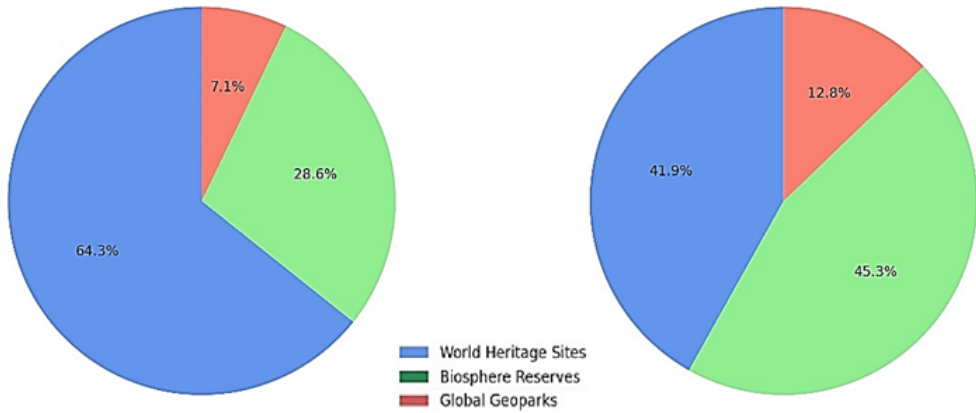


Figure 5.3: pie chart comparing UNESCO designations in Morocco and Spain across three categories

representation of its cultural and natural assets.

5.1. Analysis of Disparity in UNESCO Designated Site

Brief Historical Context:

- **The historical timeline of UNESCO recognition in both countries:**

The timeline of UNESCO recognition in Morocco and Spain reflects distinct historical trajectories shaped by each country's cultural heritage and policy priorities. Spain's engagement with UNESCO began relatively early, with its first sites inscribed in the 1980s. This period coincided with Spain's post-Franco democracy and its efforts to re-establish its cultural identity on the world stage. The country's rich historical legacy has led to a steady increase in UNESCO recognitions, ranging from architectural marvels such as the Alhambra to natural sites such as Doñana National Park. Morocco's journey toward UNESCO recognition began later, with its first sites inscribed in the 1980s. However, the pace of recognition has been much slower than that of Spain. Morocco's cultural heritage, including the ancient cities of Fez and Marrakesh, has received the majority of UNESCO recognition. Comprehending these historical trajectories serves as the foundation for examining the present discrepancy in the quantity and categories of UNESCO sites between the two nations, emphasizing how historical settings continue to influence modern heritage conservation initiatives.

5.1.2 Comparative Analysis of Historical Archives

- The Historical Influences on UNESCO Designations

The historical trajectories of Morocco and Spain have played a pivotal role in shaping the types and distribution of heritage sites designated by UNESCO (Table 5.2). In Morocco, the legacy of colonialism, Islamic heritage, and the country's strategic location as a crossroads of civilizations have had a significant impact on the focus on cultural heritage preservation. The influence of French and Spanish colonial rule has led to the preservation of historical cities, such as those in Fez, Marrakesh, and Tetuán, and architectural sites, such as the Kasbah of Ait Benhaddou in the High Atlas. These sites reflect Morocco's rich Islamic and Berber history, which has been a focal point for UNESCO recognition.

In Spain, the historical narrative is characterized by a complex interaction between Roman, Islamic, and Christian influences. The aftermath of the Spanish Civil War and the transition to democracy in the late 20th century have also played a crucial role in promoting cultural heritage as a means of shaping national identity. This is exemplified by the wide variety of places that UNESCO has recognized, from the

Table 5.2: Comparative Analysis of Historical Influences on UNESCO Designations

Aspect	Morocco	Spain
Colonial Impact	French and Spanish rule, focus on medinas and Islamic heritage	Regional autonomy post-Franco, diverse cultural heritage
Cultural Identity	Islamic and Berber heritage, historic medinas	Multicultural: Roman, Islamic, Christian, Modernist
Political Influence	Post-independence nation-building, focus on cultural tourism	Democratic reforms, decentralized heritage promotion
Heritage Type Focus	Predominantly cultural sites, underrepresented natural and mixed heritage	Balanced representation of cultural, natural, and mixed sites

modern heritage-representing works of Antoni Gaudí in Barcelona to the Alhambra in Granada, which is a symbol of Islamic sovereignty. This comparative study shows how political, cultural, and historical influences have influenced Morocco's and Spain's UNESCO-designated monuments.

- Key Observations and Interpretations:

The influence of political shifts on the recognition of heritage in both nations is seen in the chart (Figure 5.4) below. The designation of cultural treasures was given top priority by Morocco's post-independence government. Simultaneously, Spain's democratic transition made it possible for its legacy to be recognized more widely and diversely, reflecting larger changes in politics and society. This graphic highlights the importance of international participation, policy emphasis, and political stability for the accomplishment of UNESCO recognition and cultural protection.

Before Morocco's independence in 1956, no sites were recognized by UNESCO. However, after independence, the number of recognized sites increased dramatically to 14, reflecting a strong post-independence effort to preserve the country's cultural heritage. In contrast, Spain had 12 UNESCO-recognized sites before it transitioned to democracy in 1975, primarily reflecting the country's rich cultural heritage during the Franco regime. After the transition to democracy, the number of recognized sites increased dramatically to 55, demonstrating a more open and proactive approach to heritage preservation, supported by regional autonomy and an overarching focus on

5.1. Analysis of Disparity in UNESCO Designated Site

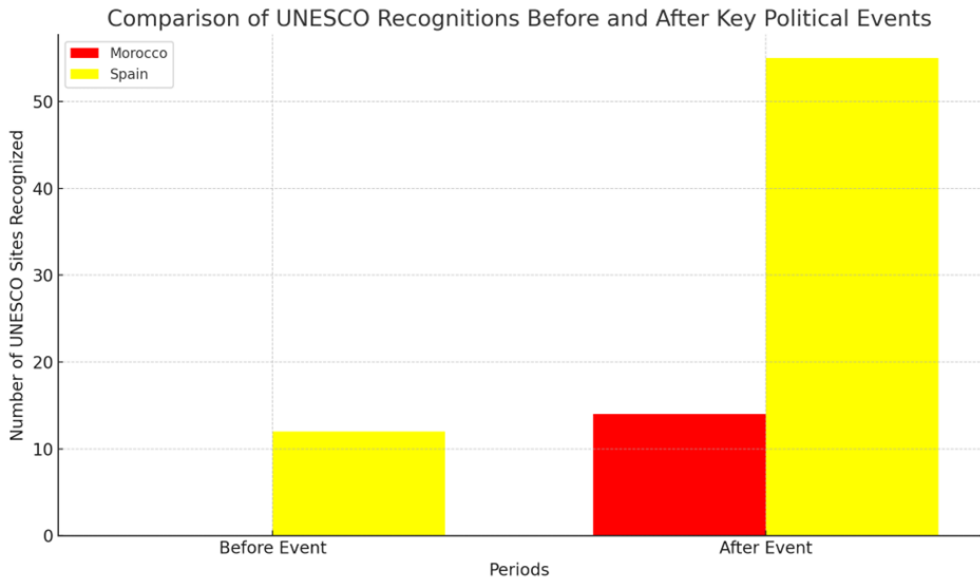


Figure 5.4: Comparison of UNESCO Recognitions before and after Key Political Events

cultural and natural heritage.

5.1.3 Policy Document Analysis

Challenges in Accessing Policy Documents in Morocco

During the analysis of heritage conservation policies in Morocco, a significant challenge was the limited availability and accessibility of detailed policy documents and the lack of comprehensive access to official legal frameworks and contracts associated with UNESCO site nominations in Morocco. Unlike Spain, where heritage management documentation is more transparent and readily available, the scarcity of such information in Morocco complicates efforts to comprehensively understand the country's heritage conservation strategies. This lack of documentation not only limits the scope of research but also poses a barrier to the effective advocacy and presentation of Moroccan sites for UNESCO recognition. The absence of accessible legal and policy frameworks may contribute to the lower number of recognized UNESCO sites in

Morocco compared to Spain, as it hampers the ability to meet international standards and present well-documented nominations.

Management and Governance

UNESCO-designated sites require strong management and governance frameworks to ensure their protection and sustainable use. This involves multiple layers of government, including national governments, local authorities, and community-based organizations.

- Spain: Well-established institutions with distinct duties and responsibilities are usually in charge of managing UNESCO sites, and they are frequently assisted by national laws and policies created especially for the preservation of cultural heritage. The national government works closely with regional and local governments to oversee UNESCO sites. Local governments and specialized organizations carry out daily management and conservation activities, with national frameworks offering extensive guidance and financing. This multi-level management system guarantees the balance between regional and national interests.

- Morocco: The government may take a more centralized approach, with national agencies handling UNESCO properties in a dominant and possibly exclusive capacity. However, because of resource limitations and administrative roadblocks, this might occasionally result in difficulties with efficient local implementation. For site management in Morocco to improve, local governance and the ability of local authorities must be strengthened. These two factors, stakeholder and community involvement, are critical to the efficient administration of UNESCO sites. Including local communities in the decision-making process is generally highly valued in Spain. To ensure that management plans represent the community's needs and goals, this involves consulting with locals, companies, and non-governmental organizations. Raising community engagement and ensuring local stakeholders have a say in the management process may improve the efficacy of site management. Crucial elements in this approach include raising community awareness and teaching them about the value of preserving cultural heritage.

5.1. Analysis of Disparity in UNESCO Designated Site

Legislative frameworks and policies

Complementing the above, it became apparent that relevant legislation and policies that affect the development and enhancement of UNESCO recognition and cultural protection need to be explored.

- Spain: They have extensive policies and regulations devoted to the preservation of cultural heritage, including measures designed specifically to safeguard UNESCO sites. These legislative frameworks guarantee that all operations surrounding the sites comply with stringent conservation criteria and serve as the foundation for implementation.

- Morocco: The government is always developing a legislative framework to improve the protection of its historic sites. Strengthening these policies and ensuring their effective implementation and enforcement is imperative for better management and protection of UNESCO-designated sites.

Financial management and resource allocation

A sufficient budget must be secured in order to administer and maintain UNESCO properties.

- Spain: In Spain, a mix of public funds, private investment, and tourism-related income supports the financial viability of these sites. Moreover, several EU financial initiatives support initiatives to conserve cultural assets.

- Morocco: Having a limited budget might present serious difficulties. Some of these problems can be mitigated by creating novel finance channels like international grants and public-private partnerships. Site upkeep and improvement also depend on the clear and effective distribution of resources.

Monitoring and Evaluation

Regular monitoring and assessment are needed to evaluate the efficacy of management techniques and ensure the continuous protection of UNESCO sites.

- Spain: They employ methodical processes for monitoring, frequently incorporating scientific investigations and frequent submissions to UNESCO.

- Morocco: They may enhance public administration and guarantee UNESCO compliance by implementing stricter monitoring procedures and incorporating outside

experts in the review process. For sustainable site management, ongoing education and change in response to evaluation findings are essential.

Socio-Economic Impact:

- **Tourism and Economic Development**

UNESCO-designated sites, including World Heritage Sites, biosphere reserves, and global geoparks, often attract significant tourism, which can be a primary driver of local and national economies.

- **Education and Research**

UNESCO-designated sites are valuable resources for education and research. In Spain, these sites are often integrated into educational programs, providing practical learning experiences for students and researchers. This promotes a deeper understanding of cultural and natural heritage and enhances the value of its conservation. UNESCO sites in Morocco also provide excellent educational opportunities, although there is potential for further development. By expanding educational initiatives and research programs centered around these sites, Morocco can enhance public awareness and appreciation of its rich heritage.

- **Environmental impacts and sustainable development**

- Sustainable tourism: UNESCO sites are significant drivers of sustainable tourism, emphasizing environmental conservation, cultural integrity, and economic benefits for local communities. In Spain, sustainable tourism initiatives linked to UNESCO sites have set standards for responsible tourism practices, ensuring that tourism growth does not jeopardize heritage conservation. While we note that Morocco's interest is weak, it could benefit more from UNESCO sites to develop sustainable tourism models that attract international visitors while preserving cultural and natural resources. Implementing sustainable tourism strategies can help mitigate environmental impacts and ensure long-term benefits for locals.

Authorities and Permissions

The management and protection of UNESCO-designated sites, such as global geoparks, biosphere reserves, and World Heritage sites, require a clear delineation of responsibilities between different authorities and a streamlined process for obtaining

5.1. Analysis of Disparity in UNESCO Designated Site

the necessary permissions to ensure their integrity and sustainability and the benefits they provide to local communities and World Heritage.

- **Spain:** In Spain, the management of UNESCO sites is usually overseen by national and regional authorities. The Ministry of Culture and Sports, along with Spanish regional governments, plays an important role in the management and conservation of these sites. Furthermore, a collaborative approach is ensured by the involvement of many local entities and non-governmental organizations in specific site management programs (UNESCO, 2020). Decentralization of power takes use of regional resources and experience while assisting in efficiently meeting local requirements [64].

- **Morocco:** Morocco tends to have a more centralized administration of its UNESCO-designated monuments than does Spain. The latter results in national authorities having exclusive control over decision-making processes, which might marginalize local stakeholders and discourage community involvement (UNESCO, 2021). While a centralized management structure might streamline some administrative procedures, it may also result in less flexibility in resolving site-specific problems and lengthier approval cycles [72].

Administrative roadblocks in Morocco often consist of protracted permission procedures and a lack of efficient coordination amongst different government entities, which might impede effective site management and conservation initiatives [22, 93, 71].

To tackle these obstacles, it is imperative to enhance collaboration across agencies, streamline administrative protocols, and encourage increased involvement of non-governmental groups and local people in management activities. By enhancing these factors, Morocco can strengthen the preservation and sustainable development of its UNESCO-designated monuments.

Challenges and Opportunities:

- **Challenges**

Morocco has several interrelated difficulties in obtaining UNESCO site designations. The low number of Moroccan historical sites is a result of problems with community engagement, sustainable tourism, finance, and governance. Challenges related to governance, such as centralized decision-making and bureaucratic inefficiency, limit the capacity of local entities to participate actively in heritage

preservation. The issue is worsened by a lack of sustainable tourism models and insufficient finance, making it more difficult for Morocco to preserve, market, and expand its historical monuments.

- Funding and Resource Allocation

Due to its vast number of sites, Spain seldom ever has financial difficulties that may lower the caliber of conservation efforts. Morocco has very few UNESCO monuments since there is very little money and support available for preserving the country's cultural legacy. Securing appropriate financing is one of the primary issues that both nations encounter while administering the sites that have been recognized by UNESCO.

- Governance and Management

Although it might be challenging, the coordination of actions across local, regional, and federal authorities is crucial. The successful management of UNESCO properties depends on effective management. For instance, diverse regional administrative procedures may result from Spain's fragmented administrative framework. Morocco, on the other hand, has a restricted number of UNESCO sites because of challenging issues with governance systems that could not be properly established, potentially creating gaps in site administration and protection [71, 93].

- Community involvement and awareness

Sustainable management and conservation of UNESCO sites depend on local people's involvement. Encouraging the local community to recognize the importance of these places and take an active role in their preservation is imperative. On the other hand, community involvement is often very high in Spain. Morocco may have greater challenges in increasing community engagement and raising awareness because of the country's inadequate educational and outreach initiatives.

A fishbone diagram, as shown in Figure 5.5, helps to explain why Morocco has fewer UNESCO sites. It elucidates the ways in which many causes exacerbate the issue:

• Opportunities for Improving Heritage Site Management in Morocco:

- Enhancing Local Governance:

Decentralization of Heritage Management: Transferring more duties from national to regional and local authorities makes more responsive and customized site management possible. Local governments are in a better position to execute more

5.1. Analysis of Disparity in UNESCO Designated Site

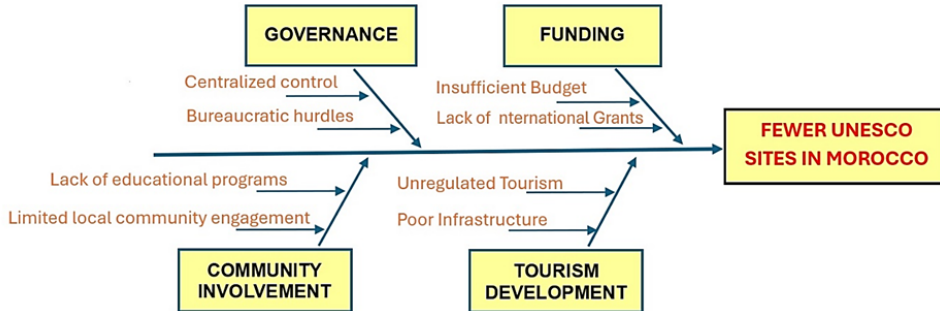


Figure 5.5: Fishbone diagram illustrating the Challenges and causes of the Limited number of UNESCO Site Designations

contextually appropriate solutions because they have a deeper understanding of their communities' unique requirements.

- Building Capacity for Local Authorities:

Morocco can improve local governance and enable more efficient administration and supervision of cultural assets by arming local governments with decision-making authority, resources, and training. Enhancing regional autonomy can also speed up the execution of preservation initiatives and reduce administrative red tape.

- Increasing Community Involvement:

Engaging Local Communities in Decision-Making: Empowering local communities by involving them in heritage management decisions can foster a sense of ownership and responsibility. This increased engagement could lead to better site maintenance, as communities will be more motivated to protect the heritage that reflects their cultural identity.

- Raising Awareness Through Education and Outreach:

Developing educational programs and outreach campaigns focused on the importance of heritage preservation can strengthen the connection between communities and their heritage. This, in turn, promotes active participation in site conservation and support for sustainable tourism models.

- Encouraging Community-Led Initiatives:

Creating opportunities for local communities to develop heritage-related initiatives (e.g., local crafts, cultural festivals, or ecotourism projects) can increase both economic benefits and conservation efforts, providing a sustainable model for site management.

- Applying International Best Practices to Morocco:

Morocco can benefit from the strategies of countries that have succeeded in this field, such as Spain. As highlighted by Mr. Maher Mahjoub, whom we could interview, the director of the IUCN Centre for Mediterranean Cooperation, whom we were able to interview, “Spain plays the role of a bridge between the countries of the North and South of the Mediterranean and exchanges experiences to improve knowledge between these countries, including Morocco; therefore, it participates in the events we organize. Organizing meetings with Spanish experts and members of IUCN in Spain to exchange experiences in creating protected areas, their management, or the conservation of species”. He adds, “The Spanish approach has many strengths. I think there was a political will to strengthen the network of protected areas and biosphere reserves in Spain. Spain has been developing its strategy for conserving biodiversity and protected areas for several years, which is a precedent in this field compared to other Mediterranean countries. Therefore, Morocco can draw inspiration from the Spanish experience. I believe that Morocco can benefit from these exchange opportunities to gain more knowledge and experience... whether creating biosphere reserves or geoparks...”.

5.1. Analysis of Disparity in UNESCO Designated Site

- Developing Innovative Financial Mechanisms: Public-Private Partnerships (PPPs):

Morocco can attract private investment through PPPs, allowing private companies to collaborate with the government in the preservation and promotion of UNESCO sites. This can generate revenue for conservation while alleviating the financial burden on the state.

Tourism Revenue Allocation:

Ensuring that a portion of tourism revenue generated from UNESCO sites is reinvested into their maintenance and preservation can provide a steady funding stream. Developing sustainable tourism models that integrate conservation and economic growth can attract more visitors while ensuring long-term protection of the sites.

International Grants and Funding Programs

Morocco could explore opportunities to access international grants or collaborate with global organizations, such as UNESCO and the European Union, to secure additional funding for heritage conservation. These grants could help overcome the financial constraints that currently hinder effective site management.

To summarize the key opportunities for improving heritage site management in Morocco, the following schema (Figure 5.6) provides a visual overview of the core areas for improvement and the specific actions that can be taken in each area.

5.1.4 Exclusive comparative analysis of biosphere reserves and geoparks: Spain vs. Morocco

The area covered by UNESCO Biosphere Reserves and Geoparks in Spain is significantly larger than that of Morocco, reflecting the disparity in designation, geographical coverage, and resource allocation between the two countries.

- The Spanish Reserves are managed within the framework of the Spanish Network of Biosphere Reserves and by the Spanish Committee of the UNESCO Man & Biosphere program. This committee depends on the central administration (Ministry for the Ecological Transition) and includes representatives of the central, autonomous, and local administrations, as well as different representatives of environmental and socio-economic sectors. A Scientific Council and a Board of Managers support its management. There are also Autonomous Networks in some Autonomous

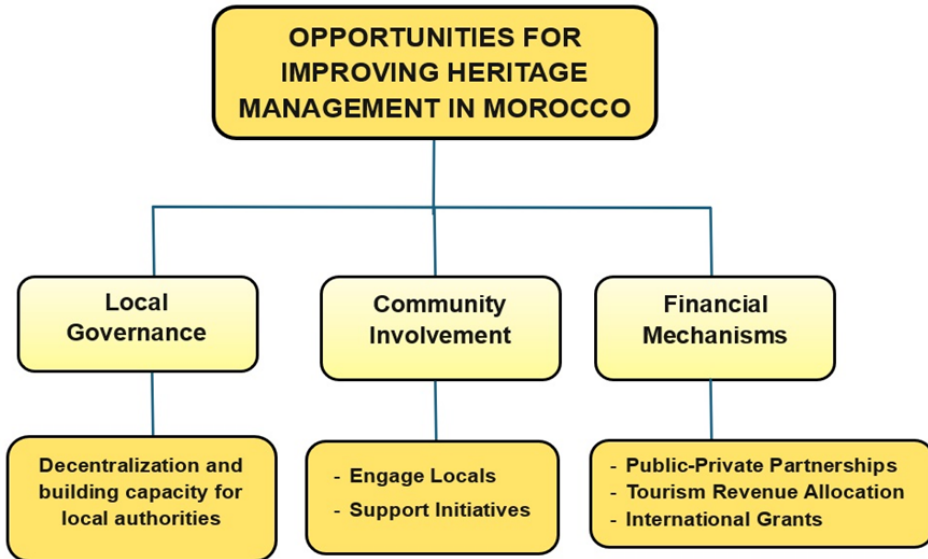


Figure 5.6: Key Opportunities for Enhancing Heritage Management in Morocco

Communities, such as the Galician Network of Biosphere Reserves or the Andalusian Network of Biosphere Reserves [110].

Morocco's government, the Ministry of Energy Transition and Sustainable Development, and the Ministry of Agriculture, Maritime Fisheries, Rural Development, Water, and Forests certainly ensure the management of this type of environmental and nature conservation, including biosphere reserves. The management consists of development projects and expansion of support for small and medium-sized enterprises in the field of the environment.

- As regards Geoparks, since they were created more recently, the Spanish Geoparks Network is less structured and developed than the Biosphere Reserves Network. The Geoparks Network is governed by a Coordination Committee made up of representatives from each geological park, plus a delegate from UNESCO. There is a permanent agreement with the organization, which is proof of its active participation in the network's projects. In addition, it has the right to veto the Committee's decisions

5.1. Analysis of Disparity in UNESCO Designated Site

[47].

Morocco's geoparks are largely managed through a centralized governance model, with local authorities managing them. Morocco's only UNESCO-listed Geopark, M'Goun Geopark, is primarily managed by the Ministry of Energy Transition and Sustainable Development. This centralized approach works exclusively with local governments and often does not include collaboration with community organizations. While Morocco's Geoparks have great potential for education and tourism, these aspects remain underdeveloped.

5.1.5 Insights from Stakeholder Interviews

Table 5.3 illustrates interviews with key stakeholders, including policymakers, heritage professionals, and community leaders, which provide important insights into the issues and prospects of cultural site management in Morocco. These stakeholders are critical in shaping policies, actions, and outcomes associated with UNESCO site recognition and preservation. This study underscores the difficulties of management, financing, and community engagement by conducting interviews with people directly involved in managing heritage sites. The interviews also reveal potential responses and tactics for Morocco's attempts to improve site management and increase UNESCO recognition.

Below are the questions used in the interviews:

Summary of Answers to Interview Questions

1. UNESCO Recognition Perceptions:

- Significance of UNESCO Recognition

Interviewees view UNESCO recognition as highly significant for Morocco's heritage sites, particularly for Biosphere Reserves and potential Geoparks. It is seen to elevate Morocco's global profile in heritage conservation, attract tourism, and secure international support for preservation efforts.

- Impact on Conservation and Management:

The designation has positively influenced the conservation and management of these sites by bringing international attention, funding opportunities, and technical assistance. However, there are concerns that the management practices have not always matched the standards required by UNESCO, particularly in natural heritage areas.

Table 5.3: Overview of Interview Questions and Responses

Section	Interview Questions
UNESCO Recognition Perceptions	<ul style="list-style-type: none"> -How do you perceive the significance of UNESCO recognition for Morocco's heritage sites as Biosphere Reserve and Geoparks? -In your opinion, how has UNESCO designation affected the conservation and management of these sites? -Do you think there is an overemphasis on cultural heritage at the expense of natural or mixed heritage sites? Why or why not?
Challenges and Opportunities in Heritage Preservation	<ul style="list-style-type: none"> -What are the main challenges faced in the preservation of UNESCO-designated sites in Morocco? -Can you identify any specific issues related to funding, tourism management, or community involvement that impact these sites? -What opportunities do you see for improving heritage conservation efforts in Morocco?
Policy and Institutional Framework	<ul style="list-style-type: none"> -Can you describe the role of local communities and stakeholders in the decision-making process regarding site management? -How do you see the role of international organizations, such as UNESCO, in supporting national heritage conservation efforts?
Comparative Insights	<ul style="list-style-type: none"> -Based on your experience, what are the key differences in how Morocco and Spain approach heritage conservation? -Are there any best practices from Spain as a neighbouring country that you believe could be beneficial if applied in Morocco? -How do you think historical, cultural, and political factors influence the success of UNESCO nominations in Morocco?
Future Perspectives	<ul style="list-style-type: none"> -What are your hopes for the future of Natural heritage preservation in Morocco? -How can both countries collaborate to enhance the recognition and protection of their shared cultural and natural heritage?

- Overemphasis on Cultural Heritage:

Many stakeholders believe there is an overemphasis on cultural heritage sites, such as historic medinas and kasbahs, at the expense of natural and mixed heritage. This is attributed to Morocco's rich historical and cultural legacy, which has traditionally overshadowed its natural and geological assets. It's common to hear emphasis on the need for a more balanced strategy that takes into account mixed and natural heritage.

2. Challenges and Opportunities in Heritage Preservation:

- Main Challenges

The main obstacles to efficiently managing and conserving UNESCO sites

5.1. Analysis of Disparity in UNESCO Designated Site

include a lack of institutional capability, inadequate finance, and a lack of local competence. Significant concerns also come from problems like urban expansion, environmental deterioration, and low community involvement.

- Specific Issues

One big problem is funding; many sites lack the resources needed to be properly conserved. Another difficulty in managing tourism is that uncontrolled travel can result in congestion and infrastructure damage. There are sometimes tensions between conservation efforts and local demands since there is little community engagement and a sense of disconnection among the local population from the management procedures.

- Opportunities for Improvement

Enhancing community participation via education and participatory management, creating sustainable tourist plans, and investing more in capacity-building for local heritage management are some areas where there is room for improvement. There is also room for expansion to incorporate natural and mixed heritage assets, especially in coastal and Atlas Mountain regions.

3. Policy and Institutional Framework:

- Role of Local Communities

Local communities and stakeholders currently have few responsibilities in the decision-making process. More inclusive policies that allow local people to take charge of their history, profit from its preservation, and engage them in site management are required.

- Role of International Organizations

International agencies such as UNESCO are vital in offering financial backing, technical assistance, and worldwide exposure. Their participation is thought to be essential to Morocco's heritage conservation efforts moving forward. To make sure that international norms are adjusted to the local context, international organizations and local institutions must work together more.

4. Comparative Insights:

- Differences Between Morocco and Spain

The methods used by Morocco and Spain to conserve their cultural legacy are very different. Spain's robust regional autonomy and fragmented government provide a more varied and regionally customized conservation approach. Morocco's centralized structure, on the other hand, frequently results in a one-size-fits-all strategy that might not work for many places.

- Best Practices from Spain

The decentralization of heritage management, increased community participation in site administration, and the incorporation of natural heritage into the conservation plan are some of the best practices from Spain that Morocco might benefit from. It is also noted that Spain is a role model to follow for its successful use of sustainable tourism to promote historic conservation.

- Influence of Historical, Cultural, and Political Factors

Several historical, cultural, and political variables are important to the outcome of UNESCO nominations. Morocco's emphasis on cultural heritage is closely linked to its post-colonial character, but Spain's success has been attributed to its proactive heritage policies and long history of regional autonomy. Political stability and foreign relations also influence the effectiveness of nominations and management techniques in both nations.

5. Future Perspectives:

- Hopes for Natural Heritage Preservation

Interviewees express hopes for a more balanced recognition of Morocco's natural heritage, including the nomination of more Geoparks and Biosphere Reserves. They desire greater investment in preserving natural landscapes and ecosystems alongside cultural heritage.

- Collaboration Between Morocco and Spain

There is strong support for increased collaboration between Morocco and Spain to protect and promote their shared cultural and natural heritage. Suggested areas for cooperation include joint conservation projects, cross-border cultural exchange programs, and shared tourism initiatives. Enhanced collaboration could help both countries leverage their unique heritage assets for mutual benefit and greater international recognition.

5.1. Analysis of Disparity in UNESCO Designated Site

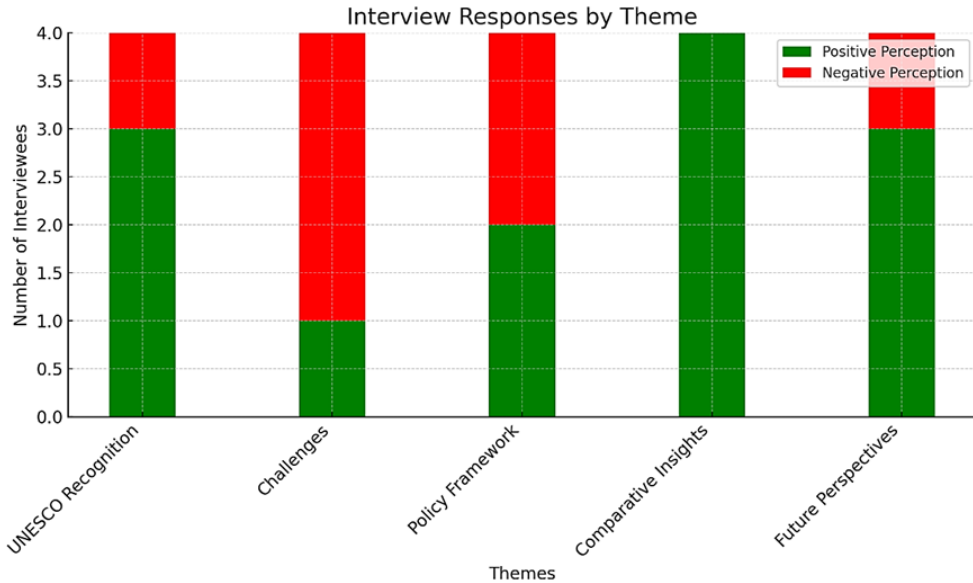


Figure 5.7: Thematic Analysis of Interview Responses: Positive and Negative Perceptions

The bar chart above (Figure 5.7) represents the interview responses across different themes:

- UNESCO Recognition: Most interviewees had a positive perception (3 positive, 1 negative).
- Challenges: Most interviewees identified challenges in heritage preservation (1 positive, 3 negative).
- Policy Framework: Mixed responses with equal positive and negative perceptions (2 positive, 2 negative).
- Comparative Insights: All interviewees had positive views, indicating a strong interest in learning from Spain's practices (4 positive).
- Future Perspectives: Mostly positive outlook for the future of natural heritage preservation (3 positive, 1 negative).

5.2 Recommendations for a New Geopark in the Rif Region.

5.2.1 Brief Overview of the Rif Region and Its Significance

- **Geographical Settings** The Rif region is situated in the north of Morocco and is surrounded by stunning mountains that line the Mediterranean coast, as shown in Figure 5.8. This special location is a part of the western end of the Alpine Orogenic system [52, 82, 105]. The same system also includes the southern Spanish mountain chain known as the Betic Cordilleras. Together, they form the Gibraltar Arc, a special geological feature. It delineates a change from the Atlantic to the Tethys realms [111]. The Rif's geographical settings provide stunning views and, therefore, host a wide variety of ecosystems. making it an area of great environmental importance.

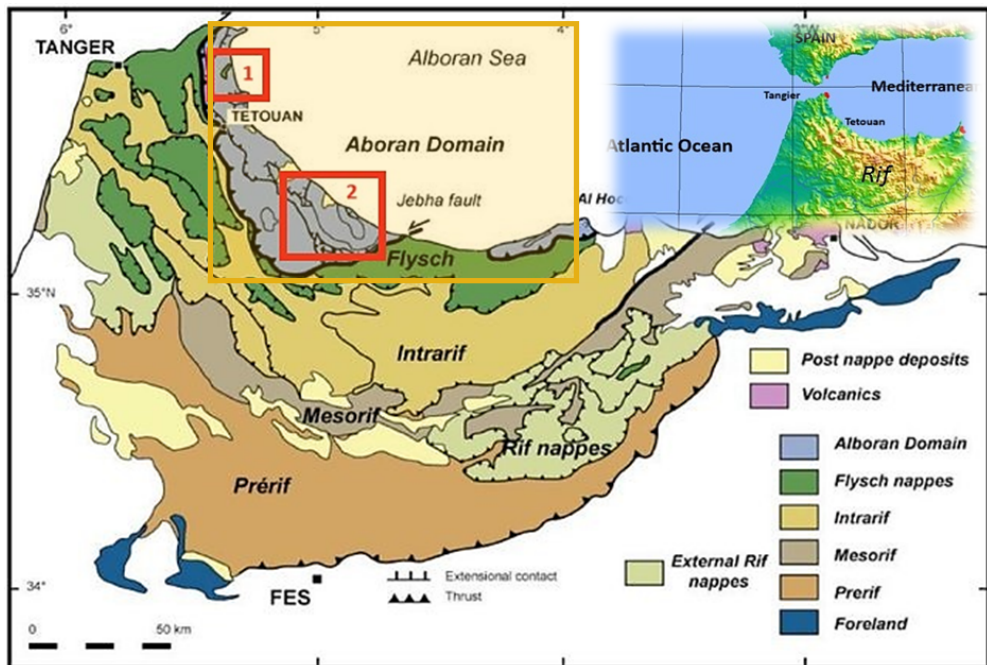


Figure 5.8: Geographical and Geological Map Showing the Location of the Aspiring Rif Geopark and Study Areas. (Map modified after [99])

5.2. Recommendations for a New Geopark in the Rif Region.

The Rif region also has a rich cultural heritage. It's home to traditional Rifian villages, bustling cities like Chefchaouen, Al-Hoceima, and Tetouan, and many archaeological and historical sites. These reflect the region's long and varied past. The region's natural beauty and historical landmarks make it a great place for conservation and sustainable development initiatives.

- **Climate:** The Rif region is a place of diverse climates due to the various landscapes found there. The coast displays a Mediterranean-type climate, while the interior mountains have a more continental climate. This climatic diversity enhances the rich biodiversity and lush vegetation, attracting nature lovers [16, 51].
- **Cultural Aspects:** The Rif region is a place full of culture. It's a home to the Berbers. They've lived there for many, many years. Hundreds, in fact. They still follow ancient customs. A bunch of beautiful villages can be found in this area. The deep heritage of the people was greatly impacted by the old markets and traditional crafts. Chefchaouen city is located in Morocco's northern region. It's famous because its walls and houses are all painted blue. The fact that it has Berber, Arabic, and Spanish influences makes this city super unique. The deep heritage of the people was greatly impacted by the old markets and traditional crafts. A city called Chefchaouen is in Morocco's northern region. It's famous because its streets and houses are all painted blue. The fact that it has Berber, Arabic, and Spanish influences makes this city super unique. [131].

The Rif area has more than just culture. It's rich in history and nature too. Long ago, traders used its paths. Old sites tell tales from those times. With many ecosystems and a lively mixed culture, it is stunningly diverse. This is why it is a great spot for a new geopark. The goal of the geopark is to save its unique mix of land types and wildlife, boost sustainable tourism, and get the local community involved.

- **Biodiversity:** The Rif region includes a part of the Mediterranean Biosphere Reserve (RBIM), which covers two provinces. The Rif Region is known for its stunning mountains and fast rivers. These rivers flow quickly over transformative mantle rocks and make their way to the Mediterranean Sea. The Rif region is truly special. It has a one-of-a-kind scenery with so many different types of

plants and animals spread out across diverse landscapes. There are grand cliffs, waterfalls, and deep canyons. An exclusive Moroccan tree, the *Abies marocana*, grows here, and there are also holm oaks, cork oaks, and wild olive trees. Many animals live in the park. Golden eagles perch in the trees, mountain goats and gazelles roam freely, and even Barbary macaques call it home [98].

5.2.2 Purpose and Justification for recommending a new Geopark

- Exploring the Potential for a Geopark in the Rif Region

The Rif region, which includes areas such as Talassemtane National Park and the Beni Bouzra ultramafic massif, is characterized by its abundant biodiversity and exceptional international geological importance. Despite this natural richness, Morocco ranks behind neighboring countries, including Spain and Portugal, in terms of UNESCO-designated sites. At present, there is only one isolated UNESCO Geopark within the country, the M'goun Geopark, located in the southern region, about 700 kilometers from the Rif. This geographical and thematic disparity highlights the need to support the promotion of new sites in northern Morocco, particularly the Rif region, to achieve international advocacy, with a focus on both conservation and sustainable development.

The northern region of Morocco already hosts the UNESCO Intercontinental Biosphere Reserve of the Mediterranean. However, the initiative to create a geopark in the Rif region is consistent with its significant geological features. Unlike a biosphere reserve, a geopark doesn't only focus on biodiversity but also highlights the region's geological and cultural aspects. Thus, integrating environmental conservation with sustainable tourism and community engagement. This new plan is going to be a great addition. It will boost the already helpful biosphere reserve, which will create paths for people in this area to move ahead through aspects like geotourism. It also has plans for education programs and taking care of the environment. [53].

- The purpose of recommending a new geopark

This chapter aims to focus on supporting the creation of a 'geopark' in Rif. To highlight and explore this area's unique mix of rock types and plant-animal blend. In detail, we are going to reveal the Rif's 'geodiversity' and 'biodiversity'

5.3. KEY SITES IN THE PROPOSED GEOPARK

case study. The goal of the proposed geopark is to protect key places. These include the Beni Bouzra ultramafic massif, a type of rock formation, and Talasemtane National Park. Also on the list are the city of Chefchaouen and the water resources of the Haouz range. They also want to shelter waterfalls and native valleys. A geopark can mean great things. It can spark new learning experiences and research projects. It can also bring social and economic perks for people living nearby. The geopark is strategically important. It shows how rich the Rif region is in terms of rocks and minerals. Plus, it provides the chance to help the area grow in ways that are good for nature and respectful of our cultural heritage.

It is imperative to recognize that the proposal to create this geopark represents an individual initiative in the context of this thesis and is not associated with UNESCO or any government initiatives.

5.3 KEY SITES IN THE PROPOSED GEOPARK

5.3.1 Sites of Ecological and Natural Interests

The aspiring Rif Geopark (Figure 5.9) hosts a variety of natural landscapes, each significantly contributing to the region's ecological wealth. Three key protected areas, Talasemtane National Park, Bouhachem Natural Reserve, and Al-Hoceima National Park, are essential to the biodiversity of northern Morocco. They facilitate the existence of distinctive ecosystems that host a multitude of endemic and at-risk species.

Talasemtane National Park

Biodiversity and Endemic Species

Talasemtane National Park, located in the Rif region of Morocco, is just a 45-minute drive from the charming city of Chefchaouen. Talasemtane National Park is easily accessible for nature lovers. From God's Bridge to the Akchour waterfall, the park is home to several natural marvels. Trekking routes lead through picturesque Berber villages, allowing visitors to immerse themselves in local culture. The park is a significant conservation area known for its diverse habitats, including high mountain

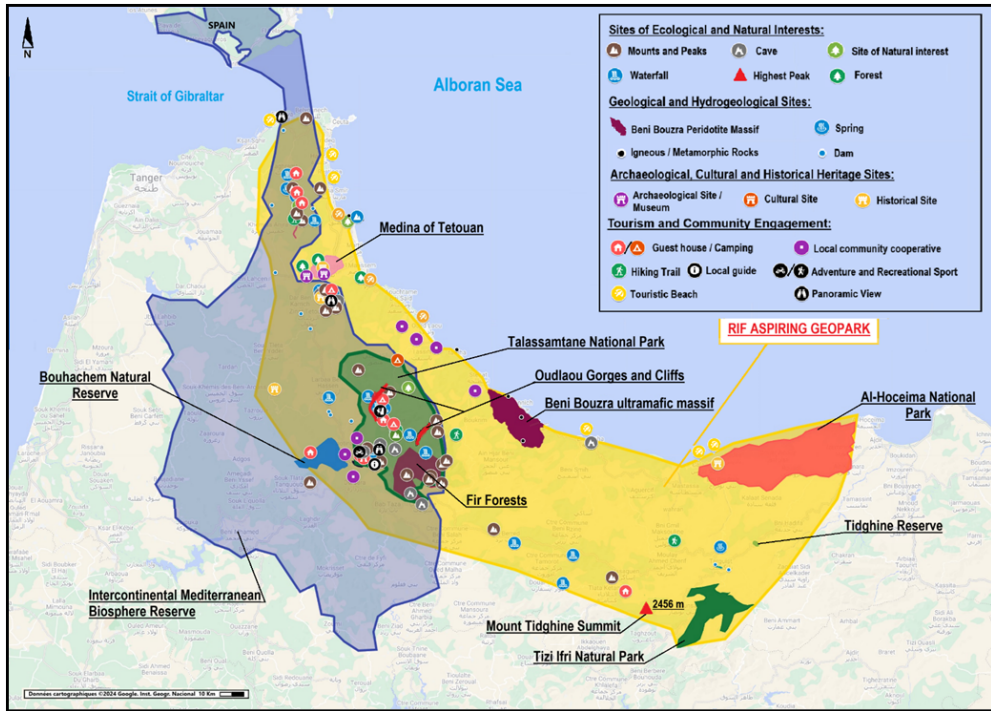


Figure 5.9: Map of the Proposed Rif Aspiring Geopark showing the Key Sites of Ecological, Geological, and Cultural Significance. (Map created by the author).

peaks, karst landscapes, and dense cedar and fir forests, particularly those of the Moroccan fir *Abies marocana* [80].

The Talasemtane National Park is an amazing place. Because it is filled with various plants and animals, it also has unique land features. The park’s unique ecological and geological features make it super important for conserving nature and contributing to sustainable development. The park has many plants and animals that can only be found there, as Figure 5.10 shows. It’s also a place that’s rich in culture. The park’s biodiversity shows that 550 kinds of beetles are there. Some beetle species are only found in Morocco (67 types), whereas 48 kinds are new to Morocco. Two beetle types are brand new to science [31]. The park is home to many different animals. The golden eagle is a kind of bird often called a bird of prey.

5.3. KEY SITES IN THE PROPOSED GEOPARK



Figure 5.10: Flora of Talasemtane National Park: Diverse Plant Life of the Aspring Rif Geopark

You might also come across a mammal like the Barbary macaque, a monkey species that is, unfortunately, facing the danger of extinction [128]. The park belongs to the Transcontinental Biosphere Reserve in the Mediterranean area. It's a place that has been known and respected by UNESCO since 2006.

Talasemtane National Park has loads of karst landscapes. These have created some truly stunning natural wonders. The park boasts plenty of caves and deep canyons, but the real attraction is the natural bridge. Known as the 'Bridge of God'. This land, filled with hollows and caves, creates many natural springs. This makes the area rich in freshwater [102]. Lots of springs are found in this place. Together with them, you'll also see stunning waterfalls. One of these waterfalls is called Akchour Waterfall, which contributes to the ecological heterogeneity of the park, making it a destination and motivating visitors, who lead to bolstering local ecosystems.

Ethnobotanism and ethnopharmacology in the Thalassantan community

- Traditional Medicinal Knowledge: Local people living in Talassemtane National Park have a deep knowledge of healing plants. They use 96 taxa tummy issues [109], a study by Redouan's team. The Apiaceae plant family is important for its healing powers [108].

- Cannabis cultivation: Cannabis cultivation in the Rif region of Morocco has many facets, so it reflects a complex interplay of tradition, legality, and economic necessity, as shown in Figure 5.11. Historically, cannabis cultivation has been an important economic activity, providing a livelihood for many local farmers. It is a primary source of income for many families, especially in areas such as Ketama and Beni Sedath [35].



Figure 5.11: Cannabis Fields in the Rif: A Part of Local Agricultural Practices. The photos were taken in the Ghomara Mountains near Beni Bouzra massif during the field work

5.3. KEY SITES IN THE PROPOSED GEOPARK

Al-Hoceima National Park

Al-Hoceima National Park, located along the Mediterranean coast of Morocco, is part of the Mediterranean Marine Protected Areas, which are known for their rich marine biodiversity. Al-Hoceima National Park presents a vital conservation area known for its diverse habitats, including rugged cliffs and fascinating beaches. These environments are home to a great variety of biodiversity, making the park an essential breeding site for various bird species. The park has a variety of seaweed species, including 306 *taxa*, 207 *Rhodophyta*, 51 *Chlorophyta*, and 48 *Ochrophyta*, which shows the park's importance as a marine biodiversity hotspot. [66].

Several jellyfish species in the marine environmental area, which appear in Al Hoceima Bay, add a valuable impact on the region's environment [32].

Bouhachem Natural Reserve

Bouhachem Natural Reserve includes a richness and diverse biodiversity, which plays an essential ecological and socio-economic role. A thousand plant taxa have been uncovered; several types were recently recognized in the region, calling attention to their botanical significance [40]. The Bouhachem Reserve is a treasure of nature. It helps local communities thrive. This is done through projects like group businesses and countryside sightseeing. [20].

- Biodiversity and Flora

This park is home to many types of plant species. Some of them are new to the area. This shows that the park has a rich variety of life (biodiversity richness). [40]. The unique ecological value of the area is improved by the presence of endemic species [40]. Moreover, this park is full of different types of oak (*Quercus* species). These trees are amazing because they add beauty to the area and improve the region's ecological balance and natural beauty, as shown in Figure 5.12.

- Fauna and Conservation Efforts

Bouhachem Park is home to the Barbary macaque, a species of conservation concern, as appears in Figure 5.13. Local shepherds have complex relationships with these primates, which can be leveraged for conservation efforts [127]. The reserve's fauna includes many species that are integral to the ecosystem's health and are of economic importance, such as those involved in pollination, as shown in Figure 5.14 [20].



Figure 5.12: Rich Tree Cover and Biodiversity in Bouhachem Park showing diverse Oak trees. (Photo taken during field trip)

Other natural site

- Mount Tidghine

Mount Tidghine is the highest peak in the Rif Mountains. It stands about 2,456 meters high and is considered an important landmark in the aspiring geopark, as shown in Figure 5.15. The summit offers spectacular panoramic views of the surrounding landscapes, where the valleys, rivers, and forests are, making it a popular destination for hikers and nature lovers. From Mediterranean shrubs to high alpine plants, the

5.3. KEY SITES IN THE PROPOSED GEOPARK



Figure 5.13: Photo of Barbary Macaques in Their Natural Habitat, Bouhachem Park "Image retrieved from Google Maps."

diverse habitats found along the slopes of Mount Tidighine contribute significantly to the biodiversity of the Rif region [29].

5.3.2 Geological Landmarks

As part of this study, a field trip was conducted to the Beni Bouzra massif and Oued Laou region to document their geological features and evaluate their significance within the context of the proposed geopark (Figure 5.8 Frame 2). The Rif Geopark proposal points to the hydrogeological and geological character, highlighting the natural history of the region and geodiversity. The most important geological features, including the Beni Bouzra Ultramafic Massif and the Ouedlau Gorges and Cliffs, also key hydrogeological assets, play an essential role in sustaining local ecosystems. The Rif region is special because of its unique features. These features open many opportunities for research and the growth of sustainable development work.

Beni Bouzra Ultramafic Massif

The Beni Bouzra massif presents an important geological feature that contributes to the geodiversity of the Rif Geopark. This huge mountain area is mostly made



Figure 5.14: Fauna of Bouhachem National Park: Existing Mammals and Birds Presented on Educational Panels.

up of deep-earth rocks called peridotites and pyroxenites, which formed under very hot and high-pressure circumstances [44]. The Beni Bouzra peridotite massif is an impressive spot. It has many complicated earth features. These make it a perfect area to investigate the area’s soil and rock diversity. Moreover, it gains the place’s looks and its chances to attract geotourism interested in rocks and soil. We will explore how the Beni Bouzra massif is connected to the region’s diversity of rocks and soil [96].

- Geological Composition and Structure

The Beni Bouzra massif— a large rock formation— has mostly mantle rocks. These are mainly peridotites with bands of pyroxenite mixed in [74, 58, 44]. This huge landform is a piece of the Alpine mountain-building system. It has contact points with nearby geological units. This adds more to the area’s geodiversity. (Figure 5.8) [118].

- Wealth of Minerals

The Beni Bouzra massif is special. It has many minerals and precious metals. It

5.3. KEY SITES IN THE PROPOSED GEOPARK



Figure 5.15: Panoramic views of Mount Tidghine (photos provided by Rchid Abrini and El Hadrati Brahim, regional guides)

has chromium —it’s a metal that’s really important. Also, there are lots of minerals like Olivine, Spinel, Garnet, Corundum, and Graphite. In simpler terms, special minerals are tucked away in a rock called chromite and other rocks, too, making this area crucial for studying geological research and possible mining activities. The Beni Bouzra massif’s geological history has made special minerals, including Ruby and Graphite, as shown in Figure 5.16, [44].

- Geodiversity and Ecosystem Services

The region’s natural geodiversity is made up of different elements. This includes various rocks, minerals, and landforms. These elements are an important part of the region’s natural capital. They help the area with ecosystem services, aiding in the formation of soil and controlling water levels [28].

The Beni Bouzra massif is a special, unique place due to its geological features, which are unique, and because of this, the area is incredibly diverse. Its diversity makes it perfect for people to visit, too. which makes it a place for research or geotourism

activities [96].

- Geotourism and Economic Potential

The Beni Bouzra area has lots of cool rocks and land because of its geological wealth. This makes it great for "geotourism" - people travel to check out the Earth's natural bits. This could mean more money for the local area, as lots of tourists would come to see the natural heritage of the region [119]. Making sure of suitable management and promotion of the natural massif's geodiversity can help to have tourism that lasts a long time and is good for both nature and local businesses' welfare [96].

- Role in the Proposed Geopark

The Beni Bouzra giant rock formation pulls in people from around the world who pay attention to investigating and exploring rocks. This includes experts, students, and holiday-goers who have a passion for the Earth's physical makeup. It's seen as an outdoor classroom where you can get hands-on learning about geology. The integration of this massif within the framework of Geopark will promote the sustainable management of mineral and geological resources while ensuring the preservation of its unique geological features [54]. Furthermore, the Geopark will facilitate community engagement by highlighting the importance of local geology in cultural and historical contexts.

Ouedlau Gorges and Cliffs

The Oudlau Gorges and Cliffs represent a significant geomorphological and geological attribute within the delineated boundaries of the proposed Rif Geopark. These precipitous gorges have been sculpted through successive layers of sedimentary rock, thereby exposing an intriguing chronicle of the geological history pertinent to the region (Figure 5.16). The revealed lithological strata serve as a testament to the intricate tectonic processes that have significantly influenced the formation of the Rif Mountains over extensive geological time, encompassing episodes of uplift, folding, and faulting. The convergence between the African and European tectonic plates made these geological formations, where the geomorphological characteristics of the region were persistently impacted [22].

- Role in the proposed geopark

5.3. KEY SITES IN THE PROPOSED GEOPARK

The cliffs show a broad mix of different rock shapes. For example, folded sedimentary strata, layers of earth twisted and turned over time, and lines where the earth split or moved. These are very important for tectonic geologists studying how the land changes. They can learn about what happened long ago in the area around the Mediterranean Sea from these rocks. The cliffs and ravines are largely shaped by the wearing away of the land, leading to awe-inspiring sceneries that hold beauty as well as importance for learning. These rocky structures are key parts of geotourism. [76]. The Ouedlau region holds promise as a leisure spot with breathtaking scenes and options for activities like rock climbing and hiking.

5.3.3 Hydrogeological Assets

a special type of landscape called karstic, this kind is usually created when rocks that can dissolve, like limestone and dolomite, wear away over time. Because of this process, it leads to some amazing features in these regions. caves that lead underground, rivers flowing beneath the surface, and even springs bursting out from the ground - it shows how easily these rocks can melt away with water. These processes are distinctly observable across the Talasemtane National Park and the Haouz chain [59].

- Karstic Landscapes and Hydrogeology

The Haouz Chain (see Figure 5.8, area 1) mainly gets most of its water from areas known as karst aquifers and springs. These groundwater reservoirs hold significant value due to their substantial hydrological capacity and the prevalence of springs, which are crucial for domestic and agricultural irrigation [18]. The karst hydrological system, characterized by its intricate network of subterranean conduits and springs, sustains a diverse array of flora and fauna while providing essential water resources for local agricultural practices and domestic needs. The hydrogeological characteristics of the Rif region play an important role in shaping the proposed geopark's natural topography, fostering its biodiversity and the local communities.

- Springs and Waterfall Networks

The abundance of springs and water resources throughout the proposed Rif Geopark has resulted in numerous waterfalls, which in turn are of ecological importance and tourist attractions, as shown in Figure 5.17. The interaction between the Karst landscape and the hydrological cycle has created a dynamic system whereby

water is filtered through limestone rocks, emerging as high-quality groundwater that supports local communities [18].

The Akchour Waterfalls

Present the most significant hydrogeological feature landmark, offering stunning views and being the tourist hotspot most visited in the region (Figure 5.17). These waterfalls, as well as others formed by karst springs, present significant opportunities for geotourism. Beyond the Akchour Waterfalls, the numerous karstic springs in the region often form small cascades and waterfalls that are less well known but still have a lot of tourism potential [46].

The God’s Bridge

The naturally formed bridge, known as “God’s Bridge”, is mainly the result of karst erosion and features seasonal waterfalls, adding to the natural appeal of the site (Figure 5.16) [69]. (Map: Natural and Geological-Hydrogeological Landmarks/Appendix) Provide a detailed overview of the locations of significant geological and hydrogeological features within the Geopark and illustrate how these assets are distributed throughout the area.

- Geopark Potential

In the frame of a new Geopark development, the unique hydrogeological features of the Haouz chain’s karst aquifers, springs, and waterfalls can be a major attraction. Educational programs can help through studies beyond the processes of karst systems, therefore revealing the importance of groundwater resources. Promoting ecotourism and local economic growth can enhance environmental awareness and conservation efforts. By integrating these aspects into the Geopark framework, those areas can become a model for sustainable development, highlighting the critical relationship between geology, water resources, and human activity.

5.3.4 Archaeological, Cultural and Historical Sites

The proposed Rif Geopark isn’t just marked by its rich amounts of stunning geological and natural highlights. It also provides a large selection of historical and cultural treasures that record the region’s cultural and historical enrichment. We will detail the important historical sites, cultural landmarks, and archaeological locations, providing their value and the potential for their assimilation into the Geopark, consequently enriching the comprehensive experience for visitors.

5.3. KEY SITES IN THE PROPOSED GEOPARK

Significant Historical Sites

Chefchaouen City

Cultural Significance:

Chefchaouen city, often called the "Blue City" or the Blue Pearl, is famous for its distinctive small, blue-painted buildings and rich cultural heritage. Founded in 1471, it has served as a refuge for various groups throughout history, contributing to its diverse cultural tapestry, as shown in Figure 5.18. The city displays pure traditional Moroccan architecture, characterized by unique tile work, wooden doors, and lively square marketplaces. It is a historical and cultural landmark where local crafts, music, and traditions reflect the region's Arabic, Berber, and Andalusian influences.

Gateway location:

The city of Chefchaouen is a big draw for visitors as a gateway to the proposed geopark. The nearby unique geological sites make this Blue City a perfect tourist hotspot. Here, visitors can start their journey to understand the area's special makeup of rocks and wildlife. The city offers many facilities, including hotels, restaurants, and shops, which provide a convenient resort for exploring the surrounding attractions.

Medina of Tetouan

The old city of Tetouan is a key spot filled with history in the Rif area. It's vital because it keeps many historical and cultural stories (Figure 5.18). The city of Tetouan holds recognition as a UNESCO World Heritage site. Due to its well-kept Andalusian building style, plus its historical part as an important place of cultural exchange between the two nations, Spain and Morocco. Integrating the ancient city of Tetouan as a part of the proposed Rif Geopark. This put a spotlight on how old this place's story is and its connection with the bigger Mediterranean region.

Archaeological and Cultural Features

The proposed geopark in the Rif area carries a lot of important landmarks. These landmarks - some archaeological and some cultural - provide facts about the Rif's diverse history. Among these landmarks are:

Tamuda Roman Ruins

Tetouan City is home to the remains of ancient civilizations, such as the Roman era, found in the nearby Tamuda archaeological site. The ruins include the remains

of Roman baths and settlements, revealing the region's historical importance within the Roman Empire.

- Traditional Berber Villages

The traditional Berber villages spread all over the Rif Mountains seem to be a testament to the resilience and cultural heritage of the old indigenous communities (Figure 5.18). These villages are characterized by small cottages built basically with stones and clay. The use of local materials and sustainable agricultural methods reveals the deep connection with nature, offering a unique cultural perspective within the proposed geopark.

- Historic Shrines and Kasbahs

The historical site of the fortress Alcala Torres, located on the Mediterranean coast, is a historic quadrangular fortress or kasabah near the archaeological site of Badis (Al-Hoceima) (Figure 5.18). Covering 670 square meters and standing 90 meters above sea level, it reflects a blend of Moroccan and Iberian architecture, featuring six towers and remnants of rooms and galleries. These structures were essential for maintaining control over maritime routes and trade, particularly during the 15th to 18th centuries [43]. Nestled in the Al-Hoceima National Park, it brims with rich heritage value and tourism potential. [63].

- Museums

This area has many special museums, especially for preserving and displaying its rich cultural and historical heritage. They hold and show the area's deep history and culture. They also make the visit more exciting for visitors coming to the proposed geopark. The top ones include:

Chefchaouen Ethnographic Museum

The Ethnographic Museum lets visitors dive deep into the rich cultural heritage roots of the Rif region. It shows the daily life of the Berber tribes springing to life. Their traditional clothes, shiny jewelry, handy tools, and musical instruments fill the museum. It's a key spot in the geopark and helps visitors truly grasp the deep-seated customs and histories of the Rif.

Tetouan Archaeological Museum

The Tetouan Archaeological Museum is teeming with priceless artifacts. They span many periods, from the Roman era right up to the Islamic one. This treasure trove includes pottery, coins, trinkets, and tools. They were all found in northern parts of

5.3. KEY SITES IN THE PROPOSED GEOPARK

Morocco (in places where we dig up old stuff, Figure 5.18). These fascinating bits and pieces in this museum tell the story of the different cultures and times that have left their mark on the Rif region. They make the museum an important and precious part of the Geopark's culture.

Dar El Adi Museum in Tetouan

This house-museum is tied to the culture of Andalusia and Tetouan's history. It spotlights Tetouan's pivotal role in Moroccan and Spanish cultural swapping. One ancient Tetouan painting in the museum dates back to 1572. It is one of the city's earliest known drawings. By including these museums in the proposed geopark, we could boost visitors' cultural experiences. This museum links the gorgeous nature of the Rif region to its deep human past. .

5.3.5 Integration within the proposed Geopark

The proposal of the Rif region's geopark highlights the importance of historical monuments and culture. Places like Tetouan's old city, the ancient Roman ruins of Tamuda, the native Berber villages, and museums reveal a captivating story. Specifically, they demonstrate how the natural environment directly shaped where people chose to settle down and grow their traditions and way of life, development, and historical events [112].

- Cultural Adaptation to Geology:

Traditional Berber villages exhibit how people and land work together closely. They build their homes using rocks and mud. This demonstrates how deeply connected they are to the land inhabitants and its geological resources. Their clever designs came about because of the challenging lay of the land. It's a testament to the locals' creative resilience.

Historical Settlements and Geosites

The ruins from Roman times in Tamuda, a part of the Rif Region, reveal a lot about the ways people in the past used the area's geology. In this area, the ruins are often found in places where natural supplies for life are easy to reach. For example, they would have been near supplies of stones for building or water springs. These supplies are closely connected with the type of land there, known as karstic landscapes. It can better grasp how the land features played a part in the historical sites and living

patterns of people when we understand how these old sites are tied to the area's geology. [17].

- Museums such as Bridges Between Culture and Geology

Local museums play a crucial role in showing the links between geological and cultural history. These museums can be considered educational spots for visitors about the countryside's intertwined nature of geology and human history. Displays of traditional tools and building materials highlight the use of local rocks and minerals, and they are therefore important as they demonstrate how geological and cultural history fit together.

5.3.6 Tourism and Community Engagement

The proposed Rif Geopark offers numerous sustainable tourism opportunities that benefit visitors and local communities, as shown in Figure 5.19. We will discuss below the existing tourism infrastructure, community involvement in geopark development, initiatives to enhance sustainable tourism, and the various recreational spots that provide stunning panoramic views of the Rif landscape.

Tourism Infrastructure

The Rif Geopark provides a solid tourism infrastructure that enhances sustainable tourism initiatives. There are plenty of guest houses and camps in the Rif mountains. Local families operate them. These places let the visitors have a real cultural experience. Plus, they help local communities directly. There are many great trails for hiking. Leading to Mount Tidighine or the beautiful Akchour Waterfalls. Visitors can explore the area's nature up close and also be kind to the environment. It could enhance the trails with informative signs and rest spots. This way, they become easier to use and make the area more charming for love-nature visitors.

Community Involvement in Geopark Development

The objective is to make the aspiring Rif Geopark. It's a big challenge, and everyone in the local communities has a part to play. It's about how to manage resources and get benefits from visitors. Different groups cooperate together, and each one adds something special to help make the Geopark's development:

5.3. KEY SITES IN THE PROPOSED GEOPARK

Artisanal Cooperatives

These cooperative groups make all the old-style stuff. The clay stuff group from Farran Ali in Ouedloau and the needlework groups in Chefchaouen make all those traditional rugs. But they're not just messing around with clay and thread. They're keeping the old skills and techniques alive. On top of that, it sustains local craftsmanship while providing more economic opportunities for artisans.

Agricultural Cooperatives

This type of cooperative effort encourages not-so-harsh farming methods to produce stuff like olives and honey. Where Dar Nahla cooperatives to produce dairy products like what comes out of the Chefchaouen cheese factory. This is where the farmer buddies get to sell their stuff, and they cook up organic goods for all the visitors.

Tourism and Guide Cooperatives

The tourism and local guides groups offer rich guided tours for visitors. They showcase the area's natural and cultural heritage and ensure that tourism benefits the locals.

Women's Cooperatives

Another type of cooperative is related only to women's cooperatives. It helps them become financially strong by offering crafts, cooking services, and gathering healing herbs. But it's not just a financial matter; it's also about building better communities in the geopark.

Panoramic observation points and recreational areas

The Rif Geopark is full of places to look out and play. These numerous panoramic observation spots give amazing views and chances for green tourism; therefore, rich ecotourism opportunities (See Figure 5.19 #4). There are plenty of amazing views from Mount Tidghine, which is a top spot to look out at the pretty valleys and the Mediterranean coast. For visitors who are bird lovers, this observation area is perfect for monitoring many different types of bird species. Moreover, it provides opportunities to explore the land's diverse and unique mix of natural environments. Doing sports activities such as hiking, climbing, or taking a nice walk in nature.

5.3.7 Recommendations for Awareness and Education

Boosting people’s knowledge and making education widespread are needed for the sustained success of the proposed Rif Geopark. In this matter, several strategies are recommended to grab the attention of locals and tourists. This will help them understand distinctive natural, cultural, and geological regions:

Community Awareness Programs

Community participation in the events and workshops to pay attention to the significance of conserving geological, ecological, and cultural heritage. At these workshops, people take part in activities. These events include interactive sessions focused on sustainable tourism, environmental preservation, and traditional ecological knowledge. This helps local communities push the geopark’s goals forward.

Collaborative Initiatives and Community Engagement

Incorporate the geopark study into subjects within the academic curriculum by developing partnerships with local educational institutions. Moreover, organize several excursions to amazing geosites and cultural and historical heritage sites to provide fieldwork learning for students. In the interview, Mr. Maher Mahjoub emphasized the importance of participation and communication, saying: “I think Morocco will have to try to communicate with all the non-national and national actors and the local population to create a geopark. So that locals understand why this Geopark project is important for them and why it is important for the country. The work aims to generalize communication and simplify these concepts, because not everyone understands or knows about these Geopark projects. Therefore, making this effort to communicate and share knowledge is important.”

Visitor Engagement Initiatives

It is recommended that educational exhibits and information panels be developed in significant geosites, as well as for trails and visitors. This will facilitate a full understanding of the region’s geology, history, and biodiversity. Moreover, this can be enhanced by guided tours supervised by professional local guides who can provide full information on the significance of each location.

5.4. ALIGNMENT WITH UNESCO GLOBAL GEOPARK STANDARDS

Training Programs for Local Guides

The process of teaching the local guides, those guiding the tourists, more about our land, culture, and heritage. Training to beef up their understanding of rocks, animals, and plants, explaining about the people who lived here ages ago. This blueprint isn't just about making them smarter; it aims to make sure they're all set to show the visitor around.

Public Awareness Campaigns

Actually, using social media such as Instagram, Facebook, and others to make the public more aware and promote things happening in the community that highlight the geopark's aspects and the necessity for conservation initiatives. These efforts highlight the geopark's distinctive features. On the other hand, they increase the benefits of sustainable tourism for the local community.

Establishment of Learning Centers

Actually, setting up general learning spots in the geopark. They should cover a bunch of aspects related to the geopark. Like rocks, nature, and local traditions. These centers can facilitate workshops, lectures, and interactive activities for visitors, students, and researchers, thereby fostering lifelong learning and an enhanced appreciation of the Rif's natural and cultural assets.

5.4 ALIGNMENT WITH UNESCO GLOBAL GEOPARK STANDARDS

The essential components of the aspiring Rif Geopark clearly meet the challenging criteria set by UNESCO for classifying Global Geoparks, providing important geological heritage, natural ecosystems, and significant cultural sites. The sites highlight diverse, substantial geological formations, including the Beni Bouzra massif and karst landscapes, while also including cultural heritage sites featuring traditional Berber communities and historic monuments such as the Medina of Tetouan and Chefchaouen city. The integration of natural, cultural, and educational resources furthers UNESCO's goal of promoting geodiversity, advocating for sustainable

tourism, and stimulating community participation, thus ensuring that the aspiring Rif Geopark meets international recognition standards.

CONCLUSION

In conclusion, the aspiring Rif Geopark is a valuable opportunity to showcase and preserve the region's abundant natural, geological, and cultural heritage. By integrating key sites of ecological significance, particularly geological structures, cultural sites, and community engagement programs, the Geopark aims to promote sustainable development that serves the environment and local people. Maintaining the long-term viability of the Geopark is essential, with proposed educational initiatives and awareness campaigns playing a significant role in creating a deeper connection between visitors and nature. The aspiring Rif Geopark aims to showcase the conservation and reverence of both natural and cultural heritage, consequently facilitating social and economic growth in conjunction with environmental sustainability within the region.

5.4. ALIGNMENT WITH UNESCO GLOBAL GEOPARK STANDARDS



Figure 5.16: Geological Highlights of the Rif Region: Mineral Samples and Notable Geological Formations. (Photos taken during the field trip). In the Beni Bouzra massif: 1-Graphite-Garnet magmatic rock. 2-Magmatic Rock with large garnet crystals. 3-Rock Containing Large Crystals of Corundum (Ruby). 4-Deformed Mineral in Host Rock Indicate Tectonic Activity in the Geopark Region. In the OuedLou region: 5- Natural Bridge or God's Bridge indicates severe Karst erosion in the Geopark. 6- Gorges and Cliffs from Quedlau



Figure 5.17: Waterfalls and Springs Showcasing the Hydrological Features of the Geopark. 1- Water source in Bni Bouzra. 2- Karstic formations in the Akshour region. 3- Akchour, the highest waterfall.



Figure 5.18: Key Sites Highlighting the Historical Significance of the Rif Region: 1- The Historic Medina of Tetouan: A UNESCO World Heritage Site. 2- Blue-painted walls in the City of Chefchaouen (Photo Credit: almaghreb24.com). 3- The dismantled Kasbah (fortress) at the top of the hill in Tetouan City. 4- The exhibition of Roman Artifacts at the Archaeological Museum in Tetouan City, Highlights Regional Archaeological Heritage. 5- Torres de Alcalà or Kasabah of Sanhaja stronghold and pearl of Al Hoceima National Park (Photo Credit: www.Madar.com). 6- Traditional Berber Village Reflecting the Region's Rich Cultural Heritage.

5.4. ALIGNMENT WITH UNESCO GLOBAL GEOPARK STANDARDS

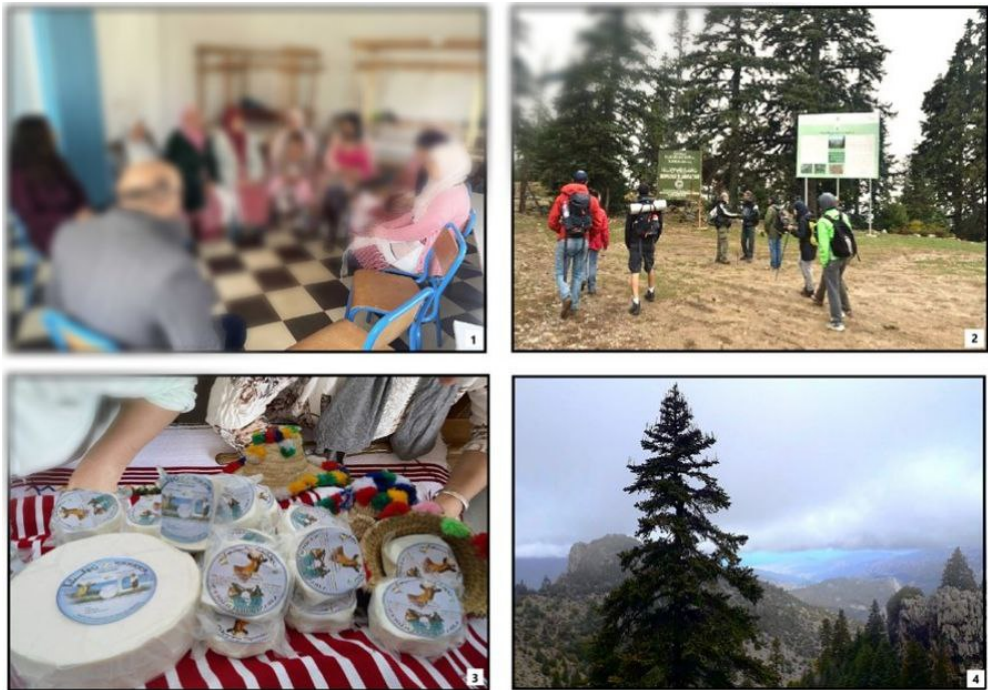


Figure 5.19: Community Engagement Activities in the Rif Geopark Region: 1- Community Workshop with Local Women Artisans (Photo credits: <https://www.aethnic.org>). 2- Guided Tour through Talasemtane National Park. 3- Local Dairy Products and Traditional Crafts Displayed at a Community Market. (Source: Official Facebook page for local production promotion of goat cheese). 4- Breathtaking Panoramic View of the Mediterranean Coast from Talasemtane's Cedar Forests.

Chapter 6

Conclusions and Future Work

6.1 Conclusions

In this PhD dissertation, we have presented Morocco's main challenges in the complexities surrounding heritage preservation and UNESCO recognition. Various variables contribute to the difference in the number of UNESCO-recognized sites (geoparks, biosphere reserves, and World Heritage Sites) between Morocco and Spain. We conducted a comparative approach between Morocco and Spain, focusing on the significant differences in the documentation and public awareness of UNESCO-designated sites in both countries. More, a focus on a thorough analysis of these differences, particularly examining how Spain's approaches and strategies can inform and potentially improve conservation efforts and public engagement in Morocco.

This dissertation explores two main aspects: The first aspect reveals the challenges behind Morocco's limited recognition of UNESCO sites, and the second aspect is relevant to the recommendation for developing a new geopark in the Rif region to promote heritage conservation and sustainable development.

- **Challenges behind Morocco's lack of UNESCO-designated sites**

We provided critical insights into the challenges, opportunities, and potential strategies for improving heritage site management and UNESCO designation processes in Morocco.

6.1. Conclusions

The main key findings are summarized below:

- Governance and Management Challenges:

Morocco's centralized governance model limits the effective engagement of local authorities and communities in heritage management, creating bureaucratic delays and inefficiencies.

- Funding and Resource Allocation:

Morocco faces significant financial constraints in heritage preservation. It relies heavily on limited government budgets and lacks access to diversified funding mechanisms such as public-private partnerships and international grants.

- Community Involvement:

Limited community engagement and a lack of educational programs about heritage preservation weaken conservation efforts and hinder sustainable development.

- Policy and Documentation Transparency:

Morocco struggles with inconsistent policy enforcement and limited documentation, which hampers the preparation of strong nomination dossiers for UNESCO recognition.

- Comparative Insights from Spain:

Lessons from Spain highlight the importance of decentralized governance, sustainable tourism practices, and robust stakeholder collaboration in achieving successful heritage management and increased UNESCO recognition. Morocco could benefit from adopting some of these best practices to strengthen its heritage conservation efforts.

- Interviews and Stakeholder Perspectives:

Stakeholder interviews reinforced the need for stronger local governance, community participation, and innovative funding strategies in Morocco.

• Recommendation of a New Geopark in the Rif Region

This thesis has explored the opportunity to develop a new geopark due to its rich biodiversity and geodiversity, complementing the existing biosphere reserve in northern Morocco. The potential for the Rif region to be established as a UNESCO Global Geopark, emphasizing its unique geological, ecological, cultural, and tourism assets. The findings highlight the region's diverse geological formations, including the Beni Bouzra Ultramafic Massif and karst formations in Oudlau, as well as

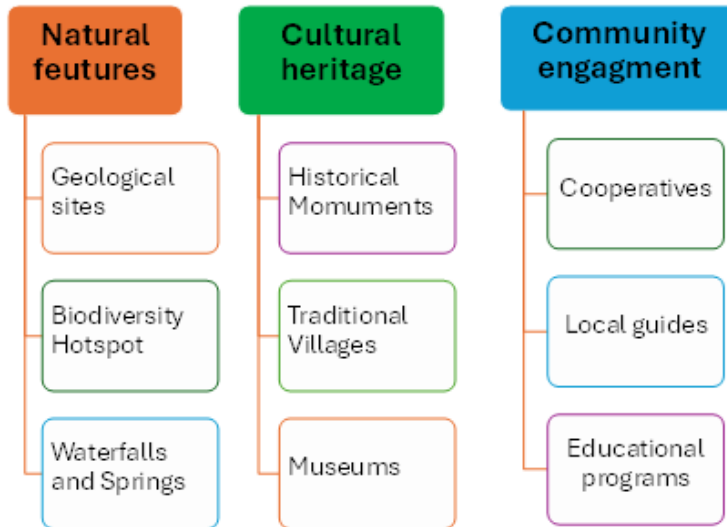


Figure 6.1: Scema displays the Key component of the proposal Rif Geopark

its rich biodiversity in protected areas like Bouhachem and Talasemtane National Parks. Enriching the region with historical and cultural landmarks, such as the Medina of Tetouan, makes it a compelling candidate for a Geopark designation. We concluded that the proposed Rif Geopark is well-aligned with UNESCO's standards, demonstrating significant geological heritage, sustainable tourism potential, and active community involvement. Integrating local cooperatives and educational initiatives ensures that the benefits of Geopark development are shared equitably, fostering both environmental conservation and socio-economic development.

6.2 Future Work

Future work should focus on promoting heritage conservation and supporting recognition initiatives in Morocco. Subsequent research efforts could assess the practicality and lasting consequences of initiatives such as the proposed Rif Geopark by conducting extensive environmental assessments, facilitating stakeholder dialogue, and analyzing economic feasibility. Collaborative initiatives with international entities and neighboring countries could be critical in disseminating expertise and

6.2. Future Work

coordinating regional conservation goals. Furthermore, collaboration with local communities, academics, and stakeholders will be essential to enhance management methodologies, create educational frameworks, and promote sustainable tourism that benefits environmental integrity and local populations.

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Appendix A

Interviews

Interview 1: Interview with some local people during the field trip in Rif:

Hi, is it possible for me to ask you some questions regarding my doctoral research?

- Yes, please.

- Are you a resident of this region?

- Yes, we are residents of this region. I work in this region.

- What do you like about this region?

- I like this region's nature, the high mountains, and the kind people.

- Is there a place in this region that is especially important to you or your family?

- Yes, there is not just one place. Still, there are many places, such as Chefchaouen, which have beautiful, and attractive natural places, such as the Aakhour, Oued Al-Qanar region, and OuadLau, and there are very beautiful and wonderful areas.

- Has anything changed in your daily life since this region became famous for its nature or its visitors, for example?

- Yes, the nature of work... sometimes with tourists, and sometimes I work on the land.

- What do most people work here?, Or rather, how do they earn their living expenses?

- Most people work in agriculture, livestock, and poultry farming.

- Did the land or nature help you in your work? - Of course, People who work in agriculture benefit from it by selling livestock and exploiting resources.

- Do many people visit this region from abroad?

- Yes, there are some regions that people from both Morocco and abroad, such as the Chefchaouen region, which is visited by many people and tourists in all seasons of the year, especially during spring.

- How do you feel about that?

- We feel a kind of pride and honour that I belong to this region, which is rich in nature and heritage, despite the harsh conditions and harsh nature of this mountain. Life there is almost very difficult for those who live in high villages, especially on the highest peaks.

- What does the land and nature look like here?

- Nature here is different. In winter, nature is green, and spring is rich and fruitful, while in summer it is somewhat dry.

- Have you noticed any changes over the years in this region, for example, in terms of agriculture and climate?

- What has changed is that in the last ten years, the vegetation cover has not covered the mountains as it was before, and the reason for that is due to the random cutting of trees and forests to make firewood and sell it, as well as the drought factor and climate change.

- Do you think that the land and nature here are well taken care of?

- Judging by the fact that I live here, I do not see any care from anyone, you know about the government for the residents of the region, for example, the farmers here do not have much experience in farming and irrigation. There is almost no support from the competent authority in training farmers or caring for nature here.

- Has anyone ever talked to you about how to care for the land or protect nature here?

- Yes, there are still associations that carry out initiatives such as planting olive and carob trees, but unfortunately, they are useless during periods of drought.

- Are there any problems that you see in how the land is used or cared for?

- Yes, yes, there is a lack of coordination in terms of care, as the land here needs concerted efforts between farmers and associations, or competent authorities together.

- What would you like to see improving in this area in the coming few years?

- We would like to see an improved afforestation process and pay more attention to nature on the part of civil society associations and the part of farmers and residents as well, and avoid the random cutting of the forest.

- Do you believe that society is involved in making decisions about what happens to the land and nature?

- Yes, of course. In my opinion, society is the main actor and the focus of caring for the land, forests, and nature here. Civil society is the engine of sustainable development.

Interview 2:

Interview with Dr. Maher Mahjoub, Director of the IUCN Centre for Mediterranean Cooperation

1. In your opinion, which Mediterranean country faces conservation challenges and is more urgent in preserving natural and cultural heritage?

Dr. Maher Mahjoub: I would say that the Mediterranean is a fairly important area in terms of biodiversity and in terms of climate change. The Mediterranean has been classified as a biodiversity hotspot because of its level of endemism in relation to terrestrial plants and in relation to climate change, so it is the Mediterranean. It is rapidly changing for the rest of the world, so it is a fairly important area in terms of biodiversity, and at the same time quite fragile in terms of the impact of climate change, and this of course, affects or will have impacts on the conservation of ecosystems and natural heritage in general.

So, natural heritage if we talk about the natural heritage of UNESCO it is true that if we take the southern shore of the Mediterranean there are not many sites that are registered on the UNESCO World Heritage List there are more cultural sites than natural sites and there is a big gap, let's say thinking in this sense where we will have to make more efforts, we need more will in the country to register natural sites on the UNESCO world heritage list.

2. How do you see the role of geoparks in promoting biodiversity and sustainable tourism?

Dr. Maher Mahjoub: There are not many geoparks that are classified in the Mediterranean; there are many more on the north shore than the south shore. I don't have any specific information on geoparks, but I know that there are associations in Spain that are quite active in promoting geoparks and geological heritage, and there are associations that are members of the IUCN and that work on this theme and

they want the theme of Geoparks to receive more attention, not from conservation organizations like the IUCN.

3. What strategies has IUCN implemented in the region to address both conservation?

Dr. Maher Mahjoub: IUCN works according to a program that is developed every 4 years. we are in the period 2021-2024, so the program will end this year, and we have started preparing a new program for the period 2026-2029. As part of this program, we try to cover all aspects related to conservation on the land and on the marine level, so we work on the conservation of species, the conservation of ecosystems, the promotion of nature-based solutions and this through the creation of protected areas, the reduction of drivers of species loss, etc., so we do this through projects that we develop in the countries where IUCN is present.

4. What opportunities do you see for Morocco to expand its network of protected areas or potential geoparks, particularly in regions like the Rif?

Dr. Maher Mahjoub: Yes, we need a new strategic vision for planned protected areas, but Morocco has a lot of natural, cultural, and geological potential that could make it possible to create new protected areas in terms of biological aspects, biodiversity, and preservation of geological heritage.

5. How do you think Morocco can balance the need for economic development through tourism with the need to conserve its rich natural and cultural heritage?

Dr. Maher Mahjoub: Economic sectors such as tourism and agriculture must include the conservation of biodiversity and natural heritage in their strategy and action plan, so we must promote the importance of biodiversity and the importance of natural and cultural heritage in general. And we are starting to see this through the diversification of tourist products. Now, tourists do not always want to visit the beaches and go visit the pipes in the sun, but they now have more of a need to discover natural sites, protected areas, and rare species.

6. Spain is known for its large number of UNESCO sites, geoparks, and biosphere reserves. What lessons can Morocco draw from Spain's success in heritage conservation and management of UNESCO sites?

Dr. Maher Mahjoub: Spain plays the role of a bridge between the countries of the North and South of the Mediterranean, and to exchange experiences to improve knowledge between these countries and Morocco, it therefore participates in the

events that we organize. Organizing meetings with Spanish experts with members of IUCN in Spain to exchange experiences in terms of the creation of protected areas, their management, or the conservation of species, and I believe that Morocco can benefit from these exchange opportunities to gain more knowledge and experience. Establishing biosphere reserves or geoparks.

7. What are the strengths of the Spanish approach to integrating conservation with community involvement and sustainable tourism?

Dr. Maher Mahjoub: Strengths of the Spanish approach: I think there was a political will to strengthen the network of protected areas and biosphere reserves. Spain may also have been developing its strategy regarding the conservation of biodiversity in protected areas for several years, so it may be a little advanced compared to other Mediterranean countries. Still, we can, therefore, take inspiration from the Spanish experience that which is trying to perfect it in the context of the southern Mediterranean countries. Mediterranean white.

8. Are there any specific advice or ideas you would like to give those working to promote new conservation initiatives, such as creating a geopark in northern Morocco (Rif region)?

Dr. Maher Mahjoub: Should unravel the positive implications of this project on natural resources, local people, and tourism. I think it will be recommendable to make an effort to communicate with all national and non-national actors and local people so that we can create a geopark in the countryside. They understand why this geopark project is important to them, and it is important for the country. The work aimed at generalizing communication and simplifying these concepts, because not everyone understands or has an idea about these geopark projects. So, it is important to make this effort to communicate and share knowledge once we have some agreement and acceptance... then it becomes easy.

Interview 3: Interview with Mme Hafsa Ait Aissa, Director of the Rif Women's Cooperative Center.

Location: Women's Cooperative Hub, Northern Morocco — Interview conducted in person — Language: Darija (translated to English)

1. Could you begin by introducing your role and how this center operates within

the broader network of women's cooperatives in the Rif?

Mme Hafsa: Of course. I coordinate a network of cooperatives that operate throughout the Rif region. The center here acts as a hub—we centralize the products, ensure quality control, and facilitate the sale of items produced by the women. I also coordinate workshops, field visits, and training sessions, and I regularly visit each cooperative to follow up on progress and offer support.

2. What inspired the creation of this network?

Mme Hafsa: It started with the observation that women were already doing remarkable work in small, informal groups—but they were isolated. Each one was doing a bit here and there—producing herbs, weaving, preparing oils—but without structure or long-term vision. We needed to bring them together under a unified, guided framework. That's when we began working with institutions like the Agricultural Institute to professionalize their efforts.

3. What kinds of training do you provide, and how are they adapted to rural realities?

Mme Hafsa: The trainings are designed to be both accessible and practical. We cover topics like hygiene in production, product labeling, business planning, and cooperative governance. Many of these women have limited formal education, so the training is visual, hands-on, and often in their own dialect. We also invite them to observe model cooperatives in action, it's very inspiring for them.

4. You mentioned earlier the role of medicinal and aromatic herbs. Could you expand on how this became a priority area?

Mme Hafsa: Yes, this sector came naturally. The region has a wealth of aromatic and medicinal plants, many of them used traditionally for generations. What was missing was a value chain. So we began by identifying which herbs had both therapeutic and economic potential. Then we trained women to harvest, dry, and package them properly, respecting conservation and safety standards. Customers are now invited to visit these sites, which helps build transparency and trust.

5. Have you seen changes in the women's roles or confidence since joining the cooperatives?

Mme Hafsa: Enormous changes. Many of these women had never spoken in public or left their villages. Now they're attending exhibitions, hosting visitors, and managing money. Some have even opened bank accounts for the first time. One woman told me,

“For the first time, I feel like my work matters.” That is the biggest success for me.

6. Earlier, you mentioned the richness of local plant life. Have you seen any particular environmental surprises or successes?

Mme Hafsa: Yes, actually—something remarkable happened recently. We planted some argan seeds alongside almond trees in the Ben Qureish area, mostly as an experiment. To our amazement, one of the argan trees began to grow, and it bloomed twice in a single year. That’s extremely unusual. As you may know, argan trees are traditionally native to the Souss region in the south. Seeing it thrive here, in the Rif, suggests that our local conditions may be more hospitable than we thought, especially with climate shifts. It opens possibilities for future sustainable cultivation and could diversify income for the cooperatives.

7. What are some of the main challenges you face?

Mme Hafsa: There are several. Logistics are difficult many cooperatives are in remote areas. Also, women still face social pressure from their families or communities who don’t always support their participation in economic life. And of course, funding is a big challenge. We need more sustained support, not just small project grants.

8. What about your relationship with local authorities or external institutions?

Mme Hafsa: It’s improving. We’ve built partnerships with local municipalities, NGOs, and agricultural programs. But we hope for more integration in national strategies. Women’s cooperatives are still too often seen as “secondary” or informal. But we are contributing to real development.

9. Do you think a UNESCO Global Geopark in this region could help?

Mme Hafsa: Absolutely. A geopark would bring international attention, tourism, and resources. But more importantly, it could validate the connection between our natural heritage and local production. The women here are stewards of nature, whether they realize it or not. Their knowledge and practices could be central to sustainable development in the Rif.

10. What is your vision for the future?

Mme Hafsa: I dream of a self-sufficient network of women-run businesses rooted in our local environment. Where rural girls grow up knowing they have opportunities. Where every product sold carries a story of empowerment and preservation. We are planting the seeds now, and I believe they will grow.

Thank you so much, Mme Hafsa. Your leadership is a powerful example of grassroots development in action.

Mme Hafsa (smiling): Thanks. I only try to give back what this land and these women have given me.

Interview 4:

Interview with M. Jamaldin Derder, Head of Forestry Engineering Section, DPANEEF, Tétouan

1. Thank you for meeting with us. Could you briefly describe the main priorities in managing forest ecosystems in the Rif region, especially in areas like Talassemtane?

M. Derder: Certainly. Our key priorities are the protection of biodiversity, the restoration of degraded zones, and the integration of local communities into forest conservation efforts. Talassemtane National Park is especially important, as it shelters several endemic species and rare forest types. However, pressures from human activity, such as illegal logging, overgrazing, and fire remain persistent challenges.

2. How do you see the relationship between forestry management and community participation?

M. Derder: It's essential. We've made a lot of effort to include local cooperatives and residents in reforestation projects and ecotourism initiatives. For example, involving communities in the maintenance of hiking trails or forest nurseries not only empowers them but also reduces illegal exploitation. Sustainable forest use cannot succeed without local support.

3. In your view, why is Morocco still underrepresented in terms of UNESCO-recognised sites, especially compared to neighbouring countries like Spain?

Mr. Derder: That's a very important question. From my perspective, the gap is not due to a lack of natural or cultural value — Morocco has extraordinary landscapes, biodiversity, and heritage. The issue lies more in institutional and technical aspects. We often lack integrated, well-documented proposals that meet UNESCO's criteria in full. There is also a need for more coordination between local institutions, scientific researchers, and government bodies. Many valuable sites are known locally but haven't been studied or promoted at the international level with the kind of strategic planning that UNESCO requires. Strengthening capacity, improving collaboration,

and building long-term management plans could help Morocco gain more recognition in the future.

4. Some researchers propose the creation of a UNESCO Global Geopark in the Rif. What's your perspective?

M. Derder: It's a promising idea, especially if it focuses on integrating both geodiversity and forest biodiversity. Our forests hold ecological and educational value. A geopark could help channel more funding and raise awareness. But for it to work, it must include a clear management plan, real benefits for locals, and a framework for long-term conservation.

5. Finally, what are the main ecological threats in your opinion?

M. Derder: Climate change is the biggest. We're seeing shifts in rainfall, longer drought periods, and forest pests expanding their range. The conservation plans we develop today need to be adaptable, scientifically grounded, and participatory to face future ecological shifts.

Appendix B

Summary of Comparative Study

Table B.1: Comparative Analysis of Heritage Management: Morocco vs. Spain

Factor	Morocco	Spain
Governance Model	Centralized governance, limited local authority involvement, bureaucratic delays	Decentralized governance, strong regional autonomy, collaborative approach among national, regional, and local levels
Funding Sources	Primarily reliant on government budgets, lacks diversified funding mechanisms like public-private partnerships	Combines government funding, EU support, private investment, and tourism revenues
Community Involvement	Limited engagement and awareness, minimal participation in decision-making	Strong community involvement, active participation in conservation and sustainable tourism efforts
Policy Transparency	Inconsistent policy enforcement, limited access to legal frameworks and documentation	Comprehensive and transparent policies, easily accessible documentation
UNESCO Designations	Fewer sites, mostly cultural; only one geopark (M'goun); existing biosphere reserve in the north	Numerous cultural, natural, and mixed sites; several geoparks and biosphere reserves
Sustainable Tourism	Underdeveloped tourism infrastructure, limited sustainable tourism strategies	Well-developed tourism sector with emphasis on sustainable practices and geotourism
Educational and Research Opportunities	Emerging potential, but underutilized in heritage education and research	Integrated into educational programs and research initiatives, contributing to conservation efforts
International Collaboration	Limited partnerships with international bodies for funding and knowledge exchange	Strong collaborations with UNESCO, EU, and other international organizations

Table B.2: Analyzing the strengths, weaknesses, opportunities and threats of heritage management in Morocco

Category	Details
Strengths	Rich biodiversity and geodiversity; diverse cultural heritage; recognized biosphere reserves.
Weaknesses	Centralized governance, lack of funding, limited community involvement, underdeveloped tourism.
Opportunities	Potential for new UNESCO designations (Rif region), partnerships with international organizations..
Threats	Environmental degradation, over-tourism in some regions, lack of sustainable funding.

Table B.3: Policy and Legislative Comparisons

Aspect	Morocco	Spain
Legal Frameworks	Inconsistent enforcement; limited transparency	Comprehensive, clear guidelines for all levels
Funding Mechanisms	Government-dependent	Diversified funding, including EU programs
Community Involvement	Minimal	Strong emphasis on local engagement

Table B.4: Key recommendations proposed in the study.

Category	Recommendation
Governance	Decentralize decision-making; empower local authorities.
Funding	Develop public-private partnerships and seek international grants.
Community Involvement	Strengthen community education and participation programs.
Tourism	Promote sustainable tourism strategies in heritage-rich regions.

Appendix C

Summary of general key sites in Aspiring Rif Geopark

Table C.1: Geological and Hydrogeological Features.

Feature	Type	Significance	Key Characteristics	Location
Beni Bouzra Ultramafic Massif	Geological Formation	Unique ultramafic rocks	Peridotite, Minerals, tectonic insights	Eastern Rif region
Talasemtane Karst Features	Karst Landscape	Water resource sustainability, biodiversity support	Springs, caves, limestone cliffs	Talasemtane National Park
Akchour Waterfalls	Hydrogeological Feature	Ecotourism potential and geological interest	Series of waterfalls along karst systems	Near Akchour
Haouz Chain Springs	Hydrogeological Feature	Key for local water supply and ecosystems	Karst springs, clear water resources	Haouz Chain

Table C.2: Cultural and Historical Sites

Site Name	Historical/Cultural Significance	Key Features	Connection to Geopark
Medina of Tetouan	UNESCO World Heritage Site; showcases Andalusian architecture	Traditional houses, intricate streets	Adds cultural depth to the geopark's narrative
Chefchaouen City	Known for its unique blue-washed buildings and traditional markets	Blue-painted walls, local artisan markets	Gateway to the geopark
Roman Ruins	Archaeological significance; evidence of Roman occupation	Ruins, mosaics, historical relevance	Highlights the historical dimension of the region

Table C.3: Proposed Tourism and Education Initiatives

Initiative	Description	Target Audience	Expected Outcome
Visitor Centers	Establish educational hubs near key sites	General visitors, students	Enhanced learning and visitor experience
Guided Tours	Train local guides for eco-friendly tourism	Tourists, eco-tourists	Sustainable tourism, community involvement
Educational Workshops	Conduct workshops on geology, ecology, and heritage conservation	Local communities, schools	Increased awareness and engagement
Hiking Trails	Develop trails connecting key sites and viewpoints	Outdoor enthusiasts, families	Promotion of recreational eco-tourism

Appendix C. Summary of general key sites in Aspiring Rif Geopark

Table C.4: Community Cooperatives and Their Roles

Type of Cooperative	Primary Activities	Contribution to Geopark	Examples
Artisanal Cooperatives	Craft production (pottery, textiles, jewelry)	Promotes cultural heritage and provides economic opportunities	Local craft markets in Chefchaouen
Agricultural Cooperatives	Sustainable farming, honey production, olive cultivation	Supports eco-friendly practices and supplies organic products	Olive and honey cooperatives
Tourism Cooperatives	Guided tours, visitor services	Enhances visitor experience and promotes local engagement	Tourism services near Akchour
Women's Cooperatives	Craft and culinary production, herbal harvesting	Empowers women and encourages inclusive development	Women-led craft initiatives

Table C.5: The compliance of the main components of the aspiring Rif Geopark with UNESCO standards

UNESCO Requirement	How Rif Geopark Fits	Score
Geological Heritage of International Value	It features unique geological formations, like the Beni Bousera Ultramafic Massif, which are of global significance.	TRUE
Managed by a Recognized Body	Will be managed by a legally recognized body, including local governments and community representatives.	TRUE
Comprehensive Management Plan	A comprehensive plan will address governance, sustainable development, communication, and finance.	TRUE
Regular Contact with Other Geoparks	Engages with existing UNESCO Global Geoparks and the Global Geoparks Network for knowledge exchange.	TRUE
Connection to Cultural and Natural Heritage	Links geological features with local cultural heritage for educational programs and community awareness.	TRUE
Unified Territory	It encompasses a single unified area without interrupted borders, ensuring integrated activities.	TRUE
Independent Study for Proximity to Other Geoparks	If near another geopark, an independent study will confirm geological differences and complementarity.	TRUE
Branding and Visibility	Will implement branding strategies and communication efforts, including websites, signage, and visitor centers.	TRUE

Appendix D

Online Resources

Table D.1: Online Maps

Online Maps
The following interactive maps have been created to support the findings and recommendations presented in this thesis. These maps are accessible online and provide detailed visualizations of the key sites in the proposed Rif Geopark
Link: https://shorturl.at/9EaTg

Video Interviews

As part of this research, interviews were conducted with local community members, stakeholders, and experts to gain insights into the region's potential for geopark designation. A video compilation of these interviews is available at the following link:

Video of Interviews with Local Stakeholders

Interview 1: [Link](#)

Interview 2: [Link](#)

Appendix E

Visual Compilation of Maps of different Key Landmarks from Aspiring Rif Geopark



Figure E.1: Compilation of maps



The conservation of natural resources, particularly biodiversity and geodiversity, has gained significant international Importance, especially following approval by NESCO's Executive Board. This thesis compares the distribution and Performance of UNESCO sites in Spain and Morocco, focusing on UNESCO Global Geoparks and Biosphere Reserves. Research methods include document analysis, consultations, stakeholder interviews, and field observations in Morocco. By studying successful strategies from nations like Spain, this work provides a replicable framework to enhance UNESCO site management in Morocco and other countries facing similar challenges, including a recommendation for a new Geopark in the Rif region of Morocco.