Abstract: A total of 417 intangible cultural heritage objects (ICHOs) are intertwined with traditional Chinese art, showcasing China’s rich historical heritage and distinctive creative allure. However, ICHOs currently grapple with a significant succession quandary due to modernization endeavors and the impacts of globalization. Hence, this study scrutinizes the spatial distribution of ICHO projects and inheritors and examines methodologies for inheriting these 417 ICHOs, employing approaches such as the closest neighbor index, Moran’s I index, kernel density estimation, geographic concentration analysis, and imbalance index assessment. Research indicates that ICHOs exhibit a spatial aggregation pattern, yet there is no substantial spatial correlation observed in their distribution. The national distribution highlights two core density zones: Beijing and Shanghai. In China, ICHO programs display uneven distribution across various types, levels, regions, and cultural zones. Regarding the ethnic composition of projects and inheritors, ICHO projects predominantly focus on the Han ethnic group, with a scattering of minority representations. Minority ICHO projects and inheritors are concentrated in central and eastern areas, while Han ICHO projects and inheritors are concentrated in central and western regions. Among the 148 ICHO projects lacking inheritors, 203 have one inheritor, and only 66 have several inheritors. Shanghai serves as the core density zone for 269 ICHO projects with inheritors, while Beijing holds that status for 148 ICHO projects without inheritors. Out of the 148 ICHO projects lacking inheritors, 115 belong to the Han ethnic group, with 33 split among 16 different ethnic minorities, and 2 have no inheritors. These disparities underscore the uneven distribution of ICHO projects and the critical issue of inheritance. This study identified education, tourism, digital communication, incentivizing inheritors, and international cooperation as potential strategies for preserving ICHA. Moreover, a sustainable inheritance pathway integrating government, education, tourism, and media is imperative for the effective perpetuation of ICHOs’ legacy.

Keywords: ICHA; spatial distribution; inheritance; strategy
enduring collective civilization of humanity and serves as a symbol and embodiment of national identity. Its significance lies in its legacy, encompassing a wealth of knowledge and skills transmitted across generations [4]. However, amidst the advancement of the modern economy, rapid urbanization, and shifts in production and lifestyle, intangible cultural heritage, forged over the course of human history, faces an increasingly grave crisis [5]. The waning interest of younger generations in inheriting intangible cultural heritage has led to the disappearance of certain elements of this heritage [6]. The inheritance of intangible cultural heritage is inherently more fragile, contingent, and selective compared to tangible cultural heritage, rendering the generational chain of inheritance susceptible to disruption [7]. Achieving sustainable cultural inheritance entails the learning and dissemination of traditional intangible cultural heritage techniques, integrating them into contemporary artistic expressions [8].

In 2006, Türkiye deliberated on how ineffective formal education could lead to the marginalization of intangible cultural heritage, endorsing the popular culture program initiated subsequent to the Convention on ICH [9]. A study by A. Grammatikopoulou revealed that interactive games are highly effective tools for ICH education, offering novel avenues for broadcasting and educating about ICH [10]. Tourism stands to benefit from ICH as a resource for prosperity and development, providing practical and applied scenarios conducive to ICH preservation [11]. Vietnam’s tourism appeal is augmented by ICH, which has emerged as a pivotal factor in the establishment and growth of rural tourism destinations [12]. The Somenath Halder system proposes a promotional strategy for the advancement of intangible cultural heritage tourism (ICTH), aiming to bolster local sustainability through the amalgamation of tourism with traditional ICH performance techniques [13]. Through tourism competition matrix analysis, Baoling Dong discovered that nine prefecture-level cities in Guizhou Province exhibit three types of development. Notably, Zunyi city and Qiandongnan prefecture showcase a distinctive pattern of “tourism prosperity—intangible cultural heritage tourism prosperity” [14]. Bianrong Chang underscores the significant tourism utilization potential of national intangible cultural heritage in the Yellow River Basin, suggesting that ICTH in this region could evolve through regional differentiation and linkage development [15]. The Chinese Ministry of Culture and Tourism has issued guidelines on promoting the integration and development of intangible cultural heritage and tourism. Research on intangible cultural heritage and tourism development models holds a prominent position within China’s academic community [16]. Furthermore, the General Office of the State Council of the People’s Republic of China has proposed reinforcing the protection of intangible cultural heritage [17], leading to the establishment of the Law of the People’s Republic of China on Intangible Cultural Heritage [18].

China’s national list of intangible cultural heritage includes representative items of traditional Chinese culture in 10 categories: folklore, traditional music, traditional dance, traditional drama, Chinese opera, traditional sports, amusement and acrobatics, traditional fine arts, traditional arts and crafts, traditional medicine [19]. The list comprises 1,557 items, which are further subdivided into 3,610 sub-items. In China, ICH is categorized into four levels: national, provincial, municipal, and county. As of May 2024, over 100,000 representative items have been acknowledged. This paper examines 417 of China’s most representative intangible cultural heritage items in fine arts at the national level (i.e., ICHA). As illustrated in Figure 1, the carving category includes wood carving, stone carving, and jade carving; calligraphy and painting encompass both calligraphy and painting; and the shaping category encompasses handicrafts such as clay sculpture, weaving, and lighting. Extensive research has been conducted on the spatial distribution and influencing factors of ICH across various regions of China [20–25]. While some studies have explored the spatial distribution and influencing factors of traditional music ICH [26] and traditional medicine ICH [27], there is limited research on the thematic distribution of traditional art-related intangible cultural heritage (ICHA).
This article focuses on researching traditional art intangible cultural heritage (ICHA), employing methods such as the nearest neighbor index, Moran’s I index, kernel density estimation, geographical concentration analysis, and the imbalance index to analyze the spatial distribution and current status of projects and inheritors. The aim is to examine the inheritance strategy of ICHA. Initially, based on the declared geographical locations of a total of 417 ICHA projects, the spatial distribution pattern, correlation, and kernel density of ICHA projects nationwide are analyzed. Additionally, the spatial distribution of seven factors is examined: ICHA project type, project level, cultural zone type, project province, project ethnicity, inheritor ethnicity, and inheritor quantity (Table 1). Based on the content of traditional art projects, the 417 ICHA projects are categorized into five types. Furthermore, considering the application unit of the project and the nature and impact coverage of the project itself, projects are classified into six levels and types: national, provincial, municipal, county, autonomous prefecture, and district level. China’s diverse climate types, geographical environments, material cultures, and intangible cultural conditions lead to its division into ten cultural zones: the Northeast Black Soil Cultural Zone, Yunnan–Guizhou Plateau Cultural Zone, Inner Mongolia Grassland Cultural Zone, North China Plain Cultural Zone, South China Mazu Cultural Zone, Sichuan Basin Cultural Zone, Xinjiang Desert Oasis Cultural Zone, Jiangnan Water Town Cultural Zone, Qinghai Tibet Plateau Cultural Zone, and Loess Plateau Cultural Zone. The distribution of ICHA projects spans 32 provinces and municipalities across the country (including Macau), with only Taiwan Province and the Hong Kong Special Administrative Region lacking projects. China, as a multi-ethnic country, encompasses all 55 legal ethnic groups, with the exception of the Han ethnic group, which is the majority. Data indicate that among the 417 ICHA projects, 19 ethnic groups, including 18 ethnic minorities, are represented. National ICHA representative inheritors bear the responsibility of inheritance. Research on the ethnic characteristics of inheritors reveals that a total of 377 inheritors are distributed across 17 ethnic groups, including 16 ethnic minorities. Additionally, the number of inheritors for each project is divided into 0–8 people for analysis, with a focus on examining projects with 0 inheritors. Geographic spatial expression is visualized through the categorization of ICHA projects into five categories, followed by a detailed analysis of the spatial distribution of various ICHA projects across the country, cultural regions, provinces, and municipalities. By delineating the ethnic characteristics of projects, distinguishing and analyzing the national spatial distribution characteristics of Han and ethnic minority projects and their inheritors, and assessing the
spatial association distribution between the 417 ICHA projects and 377 project inheritors, a comprehensive understanding of the landscape of ICHA is achieved. Subsequently, leveraging the results of the spatial distribution analysis, the sustainable inheritance strategy of ICHA is analyzed based on the current status of inheritance cases for each project, supplemented by considerations of education, tourism, and multimedia directions.

This study’s novelty lies in its pioneering quantitative analysis of the spatial distribution of intangible cultural heritage (ICHA) within the realm of traditional Chinese arts and crafts, employing various spatial analysis methods including the nearest neighbor index, the Moran index, kernel density estimation, geographic concentration, and the imbalance index. These methods elucidate the distribution patterns of ICHA items and inheritors nationwide, particularly highlighting the disparities in item distribution and the shortage of inheritor resources. These findings offer novel insights into the challenges confronting ICHA heritage, thus furnishing a scientific foundation for crafting tailored conservation and heritage strategies. Moreover, the practical significance of this study is evident in its provision of empirical data to policymakers, aiding in their enhanced comprehension of ICHA distribution across diverse regions and facilitating the formulation of more efficacious cultural protection policies.

<table>
<thead>
<tr>
<th>Distribution-Type Elements Type Quantity</th>
<th>Distribution-Type Elements Type Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification types of ICHA 5</td>
<td>Calligraphy and painting, embroidery, Paper Cutting, handicraft, sculpting, and carving</td>
</tr>
<tr>
<td>Classification level of ICHA 6</td>
<td>Country level, province level, city level, autonomous prefecture level, area level, county level</td>
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<tr>
<td>Cultural zone types 10</td>
<td>Northeast Black Soil Cultural Zone, Yunnan–Guizhou Plateau Cultural Zone, Inner Mongolia Grassland Cultural Zone, North China Plain Cultural Zone, South China Muzu Cultural Zone, Sichuan Basin Cultural Zone, Xinjiang Desert Oasis Cultural Zone, Jiangnan Water Town Cultural Zone, Qinghai Tibet Plateau Cultural Zone, Loess Plateau Cultural Zone</td>
</tr>
<tr>
<td>Project provinces 32</td>
<td>Anhui, Macau, Beijing, Fujian, Gansu, Guangdong, Guizhou, Hainan, Hebei, Henan, Heilongjiang, Hubei, Hunan, Jilin, Jiangsu, Liaoning, Inner Mongolia, Ningxia, Qinghai, Shandong, Shaanxi, Shanghai, Sichuan, Tianjin, Tibet, Yunnan, Zhejiang, Chongqing</td>
</tr>
<tr>
<td>Project ethnicities 19</td>
<td>The Han nationality, Nakhi people ethnic group, Tibetan ethnic group, Manchu ethnic group, Dai ethnic group, Miao ethnic group, Hui ethnic group, Maonan people ethnic group, Kazakh ethnic group, Uyghur ethnic group, Baiethnic group, Qiang ethnic group, Yi ethnic group, Mongolian ethnic group, Yao ethnic group, Dong ethnic group, Sibe people nationality, Shui ethnic group, Bouyei people nationality</td>
</tr>
<tr>
<td>Inheritor ethnicities 17</td>
<td>The Han nationality, Nakhi people ethnic group, Tibetan ethnic group, Manchu ethnic group, Dai ethnic group, Miao ethnic group, Hui ethnic group, Maonan people ethnic group, Kazakh ethnic group, Uyghur ethnic group, Bai ethnic group, Qiang ethnic group, Yi ethnic group, Mongolian ethnic group, Yao ethnic group, Dong ethnic group, Sibe people nationality</td>
</tr>
<tr>
<td>Number of inheritors 9</td>
<td>0, 1, 2, 3, 4, 5, 6, 7, 8</td>
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2. Materials and Methods

2.1. Data Introduction

The project data (including extended projects) and inheritor data of the intangible cultural heritage (ICHA) in the traditional Chinese art category were sourced from the traditional art category of the China Intangible Cultural Heritage Network (https://www.ihchina.cn/, accessed on 1 August 2023) [28]. Administrative boundaries were sourced from the 1:4,000,000 basic geographic information database of the National
Basic Geographic Information Center, while natural divisions such as the National Cultural Zone were obtained from the Atlas of China.

2.2. Research Methods

2.2.1. Nearest Neighbor Index

The k-nearest neighbor index was utilized in spatial pattern analysis and point pattern analysis, primarily to assess the level of spatial randomness. This index aids in identifying spatial clustering phenomena within a region and serves as a metric for measuring point space randomness. Its calculation formula is as follows [29]:

\[ R = \frac{r_1}{r_E} \]  
\[ r_E = \frac{1}{2} \sqrt{\frac{n}{A}} \]

In Formulas (1) and (2), \( R \) is the nearest neighbor index; \( N \) is the number of ICHA projects; and \( A \) represents the research zone. When the nearest neighbor index is equal to 1, it indicates that the points are randomly distributed; when the nearest neighbor index is less than 1, it indicates that the points are clustered; and when the nearest neighbor index is greater than 1, it indicates that the points are dispersed.

2.2.2. Moran’s I index

Moran’s I index is an indicator for spatial auto correlation, which takes into account geographical spatial factors and ranges from 0 to 1. Moran’s I index calculates the correlation between eigenvalues and surrounding eigenvalues, allowing us to compare the spatial similarity of different regions. It can determine whether a spatial dataset has a trend of spatial clustering or spatial random distribution. The calculation for Formula (3) is [30]

\[ I = \frac{\sum_{i=1}^{n} \sum_{j=1}^{n} w_{ij}(x_i - \overline{x})(x_j - \overline{x})}{S^2 \sum_{i=1}^{n} \sum_{j=1}^{n} w_{ij}} \]

2.2.3. Nuclear Density Analysis Method

Kernel density analysis is employed to compute the density of features within their proximate neighborhoods, and it is applicable for both point and line features. The declared geographical coordinates of ICHA projects served as the foundational data, and point features were created on the ArcGIS 10.5 platform to import the location of these project data into geographical coordinates. Density analysis assessed the data aggregation status of the entire region based on the input feature dataset, yielding a continuous density surface. Spatial data were then vectorized to facilitate spatial visualization analysis and expression.

2.2.4. Geographical Concentration and Imbalance Index

The geographic concentration index \( G \) was used to measure the degree of concentration of intangible cultural heritage projects within a region. A larger value indicates that the distribution of projects is more concentrated in a certain region, and a smaller value indicates that it tends to be more evenly distributed. The calculation formula is [30]

\[ G = 100 \times \sqrt{\frac{\sum_{i=1}^{n} \frac{P_i}{Q}^2}{n}} \]

In Formula (4), \( G \) represents the geographic concentration index; \( P_i \) represents the number of ICHA projects in the i province; \( Q \) is ICHA; and \( n \) is the total number of provinces.
The imbalance index $S$ can be used to measure the degree of distributional aggregation. The calculation formula is [30]

$$S = \frac{\sum_{i=1}^{n} Y_i - 50(n + 1)}{100 \times n - 50(n + 1)}$$

(5)

In Formula (5), $n$ represents the number of provinces and $Y_i$ represents the value of an indicator for the $i$th province. This formula was used to measure the degree of imbalance within a region, where $Y_i$ is the number of ICHAs or other relevant cultural indicators. The value of the disequilibrium index $S$ ranges from 0 to 1, with values closer to 0 indicating smaller differences between regions, or a more balanced distribution, and values closer to 1 indicate larger differences between regions, or a more unbalanced distribution.

3. Results and Analysis
3.1. Analysis of the Overall Spatial Distribution of the ICHA Projects
3.1.1. Spatial Distribution Pattern

During the onsite investigation process, the spatial location of ICHA projects was pinpointed on Google Maps using longitude and latitude coordinates, while the declared address of each ICHA project was determined using ArcGIS 10.5. The spatial distribution characteristics of global intangible cultural heritage projects were analyzed utilizing the average nearest neighbor index tool. A nearest neighbor index ($R$) of 1 indicates random point distribution; $R > 1$ suggests the even distribution of point-like elements; and $R < 1$ indicates the convergence and clustering of point-like elements. The results in Figure 2 show that the $R$ value for ICHA is 0.485, with a nearest neighbor ratio of 0.433225 and an actual average nearest neighbor distance of 38.6 km—significantly smaller than the theoretical average nearest neighbor distance of 89.1 km. With 99% certainty, it is concluded that the ICHA projects are spatially clustered and exhibit a significant aggregation state, indicating a spatial aggregation mode.

![Figure 2. ICHA spatial distribution pattern image.](image)
3.1.2. Spatial Distribution Correlation

According to spatial analysis methods, Moran’s I index is utilized to depict the degree of spatial correlation between elements, ranging from −1 to 1. A value closer to 0 implies a higher likelihood of random distribution, while a value closer to 1 or −1 indicates a more similar or opposite distribution pattern between the current region and its neighboring regions, respectively. In this study, ArcGIS 10.5 software was employed to compute the global Moran’s I index of ICHA, yielding a value of −0.02152—approaching 0. The normal statistic Z value was 0.10299, and the p value was 0.91797. With a probability exceeding 99%, it is concluded that there is no significant spatial correlation between the spatial distributions of ICHA projects.

3.1.3. Spatial Kernel Density Analysis

Using ArcGIS 10.5 software to analyze the geographic space data of ICHA projects, Figure 3 illustrates a significant imbalance in distribution. Four major concentration areas are evident nationwide: the Beijing–Tianjin–Hebei region, the Yangtze River Delta region, the Pearl River Delta region, and the Chengdu–Chongqing region. ICHA projects predominantly cluster in the eastern and central regions of China, featuring two high-density core zones and three sub-density core zones. The two high-density core zones are situated in the eastern region, with one encompassing the Beijing–Tianjin–Hebei region radiating from Beijing to Hebei Province, and the other covering the Yangtze River Delta region radiating from Jiangsu and Zhejiang provinces, with Shanghai as the core. The three sub-density core zones include the border area between North China’s Hebei, Shandong, and Henan provinces; the coastal border area between South China’s Fujian and Guangdong provinces; and the central region of southwest Sichuan Province. Due to the vast expanse of the northern and western regions, the number of projects is limited and scattered, resulting in a sparse distribution. Notably, five provinces and municipalities directly under the central government (including Macau) have fewer than three projects each, namely Tianjin, Guangxi, Hainan, Jilin, and Macau, despite being located in coastal areas, indicating their geographical remoteness.

![Figure 3. ICHA spatial kernel density map.](https://example.com/figure3.png)
3.2. Analysis of Characteristics of ICHA Projects with Different Factors

3.2.1. Analysis of Characteristics of ICHA Projects with Different Factors

Figure 4a indicates that the number of embroidery, sculpture and carving, Paper Cutting, calligraphy and painting, and handicraft projects is 78, 96, 56, 66, and 121, respectively, accounting for 18.71%, 23.02%, 13.43%, 15.83%, and 29.02%. The distribution map of embroidery ICHA projects in Figure 4b displays two primary core zones: one centered around the Jiangsu–Shanghai intersection, and the other around the intersection of Hunan, Xiangxi, and Guizhou. Figure 4c depicts the distribution map of sculpture and carving ICHA projects, featuring a main core zone centered around Shanghai radiating to Jiangsu and Zhejiang provinces, and a sub-core zone along the coastal areas of Fujian province. The core zone of the Paper Cutting ICHA projects in Figure 4d exhibits a belt-shaped distribution, with the primary core zone spanning eastern Jiangsu Province, Zhejiang Province, Shaanxi Province, and the Ningxia Region, and secondary core zones along the coastal areas of Fujian Province, Guangdong Province, and Hubei Province. The distribution of calligraphy and painting ICHA projects in Figure 4e is scattered, with a relatively concentrated distribution in the central region, particularly around Sichuan and Beijing. Figure 4f illustrates that handicraft ICHA projects are mainly concentrated in the core zones of Beijing and Shanghai, with a secondary density zone at the intersection of Shandong Province and Henan Province.
The intangible cultural heritage (ICHA) of traditional fine arts in China demonstrates a diverse geographical distribution, stemming from historical evolution, social development, and economic factors. Various regions have cultivated distinctive cultural heritage shaped by natural resources and environmental factors; for example, Jiangnan is renowned for its embroidery, while the Loess Plateau is known for clay sculpture. Historical migrations and trade routes have fostered cultural exchange, while the coexistence of diverse ethnic cultures within a multi-ethnic state has contributed to the enrichment of ICHA diversity.

3.2.2. Analysis of ICHA Project Data at Various Classification Levels

As depicted on the left side of Figure 5, there are six levels: national, provincial, municipal, county, autonomous prefecture, and district level. ICHA projects are primarily concentrated at the municipal and county levels, comprising 192 and 153 projects, respectively, amounting to a total of 82.74%. There are four national-level ICHA projects, all designated as protected units in Beijing, the capital city. Among these, three fall under the category of calligraphy and painting, and one under handicraft. There are four provincial-level ICHA projects, encompassing one each for embroidery, sculpture and carving, calligraphy and painting, and handicraft. At the municipal level, there are 32 embroidery projects, 54 sculpture and carving projects, 26 Paper Cutting projects, 29 calligraphy and painting projects, and 51 handicraft projects. County-level ICHA projects comprise 29 embroidery projects, 27 sculpture and carving projects, 26 Paper Cutting projects, 19 calligraphy and painting projects, and 52 handicraft projects. Autonomous prefectures host eight ICHA items, including three calligraphy and painting items, three embroidery items, and one Paper Cutting item. District-level ICHA projects amount to 56, encompassing 13 embroidery projects, 14 sculpture and carving projects, 3 Paper Cutting projects, 10 calligraphy and painting projects, and 16 handicraft projects. As shown on the right side of Figure 5, only calligraphy and painting ICHA projects are present at all six levels, whereas embroidery, sculpture and carving, and handicraft projects are predominantly concentrated at the municipal and county levels.
Figure 5. ICHA projects’ data breakdown for five classification types and six classification levels.

3.2.3. Nuclear Density and Data Analysis of Various Cultural Zones

As shown in Figure 6a, there are many ICHA project sites in the Jiangnan Water Town Cultural Zone and North China Plain Cultural Zone, while the Xinjiang Desert Oasis Cultural Zone, Inner Mongolia Grassland Cultural Zone, Qinghai Tibet Plateau Cultural Zone, and Northeast Black Soil Cultural Zone cover a large zone and are scattered. As shown in Figure 6b, the largest number of ICHA projects is in the east Jiangnan Water Town Cultural Zone, North China Plain Cultural Zone, and South China Mazu Cultural Zone, with 117, 88, and 53 data points, respectively. The Xinjiang Desert Oasis Cultural Zone and the Inner Mongolia Grassland Cultural Zone, with the smallest number of ICHA projects, have only 10 and 9, respectively. There are 44, 32, 23, 22, and 18 ICHA projects in the remaining Loess Plateau Cultural Zone, the original cultural zone of the Qinghai Tibet High-tech Project, the Sichuan Basin Cultural Zone, the Northeast Black Soil Cultural Zone, and the Yunnan–Guizhou Plateau Cultural Zone, respectively. Among the five types of ICHA projects, embroidery, sculpture and Paper Cutting are the most popular in the Jiangnan Water Town Cultural Zone, while calligraphy and painting and sculpture are the most popular in the North China Plain Cultural Zone. There are no shaping projects for the Inner Mongolia Grassland Cultural Zone, and the proportion of the other four projects is balanced. There are no sculpture and Paper Cutting projects in Xinjiang Desert Oasis Cultural Zone, and embroidery projects account for 6 of the 10 projects. There are no Paper Cutting projects in the Qinghai Tibet Plateau Cultural Zone, but the proportion of calligraphy and painting projects is prominent, accounting for 15 of the 23 projects. The Yunnan–Guizhou Plateau Cultural Zone has the largest number of embroidery projects, accounting for 10 of the 18 projects. The remaining eight projects are allocated to sculpture, Paper Cutting, calligraphy and painting, and molding. The Northeast Black Soil Cultural Zone has a high proportion of embroidery, sculpture and Paper Cutting projects, with one project for calligraphy and painting and one project for molding. The South China Mazu Cultural Zone and the Loess Plateau Cultural Zone account for a relatively balanced proportion of projects among the five types.
Figure 6. (a) ICHA distribution map of cultural zone spatial projects; (b) number of five types of ICHA projects in each cultural zone.

3.2.4. Spatial Distribution and Data Analysis of Each Province

The 417 ICHA projects are distributed in 32 provincial-level administrative regions, covering 94.12% of 34 provinces and municipalities directly under the central government (including Hong Kong, Macao, and Taiwan). The geographical concentration index of the ICHA project is $G = 21.19$, and the theoretical average geographical concentration index is 17.15, indicating that the national art intangible cultural heritage projects are clustered and distributed at the provincial level. The imbalanced index $S = 0.14$ indicates that the distribution of artistic intangible cultural heritage in various provinces is uneven. Figure
7a divides the number of ICHA projects in each province into five levels. Guangdong, Jiangsu, Zhejiang, Shandong, and Sichuan provinces belong to the first level, with Guangdong Province having the highest number of 32, accounting for 7.7% of the national total; next are Jiangsu Province and Zhejiang Province, with 31 and 30, respectively, accounting for 7.4% and 7.2% of the national total. Beijing, Fujian Province, and Shaanxi Province are classified as second-tier cities in terms of quantity. The ten central provinces are divided into three levels, while the fourth level is distributed in the western and northern provinces of China. Tianjin City, Guangxi Province, Hainan Province, Jilin Province, and Macau, with the lowest number, belong to level 5, with a total of 11, accounting for 2.64% of the total national quantity. As shown in Figure 7b, the allocation of five types of projects is uneven among 32 provinces and municipalities, with only 13 regions out of 32 provinces and municipalities having all five types of ICHA projects. There are 10 provinces without projects in the Paper Cutting category, 8 provinces without projects in the calligraphy and painting category, 6 provinces without projects in the handicraft category, and 5 provinces without projects in the embroidery and sculpture and carving category. But there are more than 10 projects in the handicraft category in Guangdong, Zhejiang, Beijing, Jiangsu, and Shandong, with 10 projects in the handicraft category in Sichuan, the calligraphy and painting category in Tibet, and the sculpture and carving category in Zhejiang. Hainan Province and Macau have two and one projects in the sculpture and carving category, respectively, while the other four categories have no projects.

![Figure 7. Spatial distribution and Data Analysis Chart of each province. (a) ICHA distribution map of provincial spatial projects. (b) Number of five types of ICHA projects in each province.](image)

3.2.5. Nuclear Density and Data Analysis of ICHA Project Ethnicity

The data in Figure 8a show that out of 417 ICHA projects, there are a total of 88 ethnic minority projects and 329 Han Chinese projects. The data in Figure 8b show that the ICHA projects of 88 ethnic minorities are distributed among 18 ethnic minorities, mainly concentrated in embroidery and calligraphy and painting with 36 and 28 items, respectively. There are many Tibetan and Miao ethnic projects, with a total of 27 ethnic Tibetan ICHA projects ranking first, followed by 14 Miao ethnic projects. Among them, Tibetan calligraphy and painting projects and Miao embroidery projects have the highest number. From Figure 8c, the distribution of ICHA Han Chinese projects is similar to that of national ICHA projects, mainly distributed in the east and supplemented by the central region, with Beijing and Shanghai as the two central density zones. In Figure 8d, it can be seen that the distribution of ICHA ethnic minority projects is scattered without obvious core density zones, with Guizhou Province, Sichuan Province, and eastern Qinghai Province in the central and western regions being the more concentrated zones. The figure shows 13 provinces and municipalities without ethnic minority projects, namely Anhui Province, Fujian Province, Hainan Province, Henan Province, Hubei Province, Jiangxi Province,
Shandong Province, Shanxi Province, Shaanxi Province, Shanghai City, Tianjin City, and Macau. The ICHA projects in Guizhou, Tibet, and Jilin Provinces are all ethnic minority projects.

Figure 8. Nuclear Density and Data Analysis Chart of ICHA projects for different ethnicities. (a) Detailed data of each ethnic group in the ICHA projects; (b) quantity details for ICHA projects of 18 ethnic minorities; (c) ICHA ethnic minority project distribution map; (d) ICHA Han ethnicity project distribution map.
3.3. Analysis of Characteristics of ICHA Project Inheritors with Different Factors

3.3.1. Analysis of the Inheritor’s Project Details

From Figure 9a, it can be seen that there are 148 projects without inheritors and 269 projects with inheritors, of which 203 projects have only one inheritor and only 66 projects with multiple inheritors. From the comparative data of projects with or without inheritors in Figure 9b, it can be seen that the proportion of calligraphy and painting projects and embroidery projects without inheritors has increased, the proportion of molding projects and Paper Cutting projects without inheritors has decreased, and the proportion of sculpture projects has not changed much. The three ICHA projects that have the most inheritors from Figure 9c have a total of eight, seven, and six individuals. They are Suzhou embroidery in embroidery, Qinghai Regong art in calligraphy and painting, and three Huizhou carving types in sculpture. From Figure 9d, it can be seen that inheritor projects are mainly located at the city, county, and district levels. The four national projects no longer have inheritors, and only one of the four provincial projects has inheritors. The projects with the most inheritors are located at the city and county levels, respectively. From Figure 9e, it can be seen that the projects with the highest number of inheritors have the highest number of inheritors in a single project. The projects with the highest number of inheritors are located in the Jiangnan Water Town Cultural Zone; the Inner Mongolia Grassland Cultural Zone has at least four inheritors, and the Xinjiang Desert Cultural Zone has only six inheritors.
Figure 9. Nuclear Density and Data Analysis Chart of ICHA Projects’ ethnic distribution. Ethnic analysis of ICHA inheritors. (a) Pie chart of the number of ICHA projects with 0–8 inheritors. (b) Comparison pie chart of whether there are inheritors in different classification types of ICHA projects (the inner circle is for projects with inheritors, while the outer circle is for projects without inheritors). (c) Bar chart of the number of ICHA projects of different classification types with 1–8 inheritors. (d) Bar chart of the number of ICHA projects at each classification level with 1–8 inheritors. (e) Bar chart of the number of ICHA projects in each cultural zone with 1–8 inheritors.

3.3.2. Ethnic Analysis of ICHA Project Inheritors

The transmission and development of inheritors from generation to generation is crucial for the inheritance and development of ICHA projects. The generation gap of inheritors has resulted in the loss of space for the development of intangible cultural heritage. However, there are only 377 inheritors in a total of 417 ICHA projects. According to Figure 10a, out of 269 ICHA projects with inheritors, there are 213 Han ICHA projects and 56 ethnic minority ICHA projects. These 56 ethnic minority ICHA projects come from 16 ethnic minorities. As shown in Figure 10b, the inheritors of ethnic minority ICHA projects are mainly single inheritors, but the Tibetan people have one ICHA project with seven inheritors and two ICHA projects with three inheritors. In Figure 10c, compared to the ethnic minorities in 18 ICHA projects, there are eight ethnic minorities with inheritors in each ICHA project. The proportion of ICHA projects without inheritors among the Kazakh, Tibetan, and Mongolian ethnic groups is lower than that of Han ethnic groups. In
Figure 10d, Han inheritors are mainly sculptors and carvers. However, the inheritors of ethnic minorities are also sculptors, carvers, and Paper Cutters. The number of inheritors of calligraphy and painting projects from ethnic minorities accounts for the largest proportion, which is close to the number of inheritors from Han ethnic groups.

Figure 10. Ethnic analysis chart of ICHA project inheritors. (a) Pie-shaped data chart of ICHA projects with inheritors from various ethnic groups. (b) Bar chart of the number of ICHA projects with 1–8 inheritors from different ethnic groups. (c) Bar scale chart of the number of ICHA projects among different ethnic groups with or without inheritors. (d) Bar scale diagram of ICHA project inheritors from Han and ethnic minority groups.

3.3.3. Nuclear Density Analysis of ICHA Project Inheritors

From the distribution map of single inheritors in Figure 11a, it can be observed that the 203 ICHA projects with single inheritors of Han nationality have Shanghai as the high-density core area, and there are three secondary density core areas in the middle. Nationwide, 165 ICHA projects with single inheritors of Han nationality are distributed in the Jiangnan Water Town Cultural Area and North China Plain Cultural Area, while the number of projects in the northwest is small and scattered. The distribution of 47 ICHA projects with a single inheritor from a minority group is scattered, but mainly distributed in the central and western regions. From the distribution map of multiple inheritors in Figure 11b, it can be seen that among the 66 ICHA projects with multiple inheritors, Shanghai is the main core density point, while the coastal areas of Fujian are the secondary core density points. The 50 ICHA projects with multiple Han inheritors are distributed in the Jiangnan Water Town Cultural District and the South China Mazu Cultural District. The ICHA project with multiple inheritors from ethnic minority groups has core density points in Ningxia, eastern Qinghai, and Sichuan in the middle, and 16 ICHA projects with multiple inheritors from ethnic minority groups are distributed in the Qinghai Tibet Plateau and the Yunnan–Guizhou Plateau Cultural Areas.
3.3.4. Nuclear Densities and Data Analysis for Projects without Legacies

The vulnerability of intangible cultures lies in their continuation through living environments and storage in the human body and mind, rather than just in documents, artifacts, and media [3]. Therefore, the 148 ICHA projects with zero inheritors are key projects for ICHA inheritance. From Figure 12a, it can be seen that in the distribution map of 0 inheritors, Beijing is the main core zone, and the secondary core zone is Guangdong. The ICHA projects with 0 inheritors focus on ethnic minorities in the central and western regions, while the Han ethnic group is distributed in the central and eastern regions. We further analyzed 148 projects without inheritors by combining project categories, project levels, cultural zones, and project ethnicity. According to the comparison in Figure 12b, there are 29 embroidery projects, 34 sculpture and carving projects, 18 Paper Cutting projects, 29 calligraphy and painting projects, and 0 inheritor ICHA projects, with the highest proportion of calligraphy and painting projects. The comparison in Figure 12c shows that there is a serious lack of inheritors of national, provincial, and autonomous prefectural projects with fewer projects. There are no certified inheritors for the four national-level projects. The number of inheritors at the municipal and county levels is 64 and 51, accounting for the same proportion. Through the comparison in Figure 12d, it is found that the Jiangnan Water Town Cultural District, which has the most projects, has the lowest proportion of projects without inheritors, while the Inner Mongolia Grassland Cultural District, which has the fewest projects, has the highest proportion of projects without inheritors. Through the comparison in Figure 12e, it was found that out of 148 ICHA projects without inheritors, 115 belong to Han ethnic group projects, and the other 33 belong to minority ethnic group projects. The only project of the Shui and Buyi ethnic groups has no inheritor, while only one project of the four Kazakh ethnic groups has an inheritor.
Figure 12. Nuclear Density and Data Analysis Chart of ICHA projects without inheritors. (a) Distribution map of ICHA projects with 0 inheritors. (b) Comparison of 5 types of total projects and projects without inheritors. (c) Comparison chart of six classification levels of total projects and projects without inheritors. (d) Comparison of total ICHA projects and ICHA projects without inheritors in 10 major cultural zones. (e) Comparison between the total number of projects of ethnic minorities and those without inheritors.
3.4. Analysis of Sustainable Inheritance Strategies

3.4.1. Education Drives the Sustainable Inheritance of ICHA

Those who are representative in specific fields and have significant influence in a certain zone are recognized by the Ministry of Culture and Tourism as inheritors of intangible cultural heritage. There are eight inheritors of Suzhou embroidery, the city-level project with the most inheritors in the ICHA inheritor list. In Suzhou Zhenhu, a cultural zone in Jiangnan Water Town, there are over 8000 embroidery workers in the Suzhou embroidery town with a population of only 20,000, far exceeding the number of people engaged in embroidery in other regions of the country. The Suzhou Municipal Government has established embroidery classes in schools to promote ICHA in classrooms, textbooks, and schools. At the same time, relevant universities and research institutions are commissioned to cultivate a group of high-level professional talents [31]. In Huangshan County of Anhui Province in the Jiangnan Water Town Cultural Zone, there are seven inheritors of the county-level project on three Huizhou carving types. The project was successfully selected by Anhui Normal University, the first batch of excellent traditional Chinese culture inheritance bases of the Ministry of Education, to build a “teacher–master of arts and crafts” teacher team construction model and introduce aspects of local intangible cultural heritage into teaching. The project hired three national-level inheritors to participate in teaching, and the school has organized some teachers in the fields of sculpture, arts and crafts, product design, environmental art, and visual communication to learn from the national-level inheritors of three types of Huizhou carving intangible cultural heritage. Combining the inheritance characteristics of intangible cultural heritage culture, the teaching method of “theory–practical training” is combined with the oral and heart-to-heart teaching of intangible cultural heritage characteristics. For the sustainable education and cultivation of ICHA inheritors, combining educational resources is an effective way to drive sustainable inheritance.

3.4.2. Tourism Drives the Sustainable Inheritance of ICHA

Among the ten major categories of ICH, ICHA tourism products are easier to develop, produce, and trade, making ICHA one of the main forces that enriches the connotation of tourism products. By using the principal component analysis method for the three Huizhou carving types, the results show a significant positive correlation between tourism and aesthetics, and the inheritance inclination of traditional handcrafts [32]. The county-level project of Regong Art in the Tibetan Plateau Cultural Zone has six inheritors. The location of Regong Art in Huangnan County, Qinghai Province, fully utilizes the central idea of “shaping tourism with culture and highlighting culture with tourism”, and utilizes cluster advantages to create local cultural and tourism brands. A demonstration zone for the integration of culture and tourism development has been established. Huangnan County, Qinghai Province, represented by Tangka, integrates ICHA products such as embroidery, clay sculpture, and carving. The key to inheriting intangible cultural heritage lies in the inheritors, and the key to mobilizing the inheritors’ enthusiasm for inheritance lies in improving their survival and creative conditions. Huangnan County drives the cultivation of inheritors through the tourism industry, motivates the local population to engage in related industries, and promotes the integration of traditional art intangible cultural heritage and tourism to explore deeper and further levels. In terms of tourism experience, the advantages of intangible cultural heritage in tourism categories are mainly reflected in handicrafts, folk festivals, and skill performances [15]. For example, Figure 13a,b show the inheritance of industrial development from a static single mode of display and shopping to a dynamic integrated system of interaction and experience. Tourism not only drives the learning motivation and enthusiasm of inheritors, but also deepens the sustainable inheritance and dissemination of ICHA.
3.4.3. Modern Technology and Innovation

Nowadays, humanity has entered the digital age, and every aspect of life contains digital elements. Digital technology can provide convenience for integrating intangible cultural heritage into modern design. As for the Regong technique, the interaction technique can provide better interactions with experiencers and let us know the material's texture and the light's effect on the Regong technique [33]. There are only 10 inheritors of 11 projects of Miao embroidery for ethnic minorities. To solve the problem of insufficient and backward digitalization of Miao costumes, this paper introduces the background and importance of the digital protection of Miao costume culture, analyzes in detail the current situation of Miao costume culture and the application of digital protection technology at home and abroad, and analyzes and organizes the research content that introduces the importance of the digital protection of Miao costumes [34]. Xiangxi Miao Embroidery APP was established in Xiangxi, Hunan Province, and coordinated with Guizhou Province to build a global designer open platform, Miao Embroidery Material Library, and Miao Embroidery Girl Database. Guizhou has collected and organized 6000 pieces of Miao embroidery from various regions; extracted nearly 2000 vectorized patterns using technical means; and classified, numbered, registered copyright, and stored block-chain certificates
for the vectorized patterns. With these databases, designers around the world can easily extract and use Miao embroidery elements when designing their work. While inspiring creative inspiration, they also successfully combine Miao embroidery with modern fashion, finding new living grounds for Miao embroidery skills. Programmable robotic embroidery machines have greatly improved the production efficiency of embroidered textiles and promoted the development of electronic textiles. AI, mainly deep learning technology, brings significant benefits to esthetic embroidery creation. Technology-based embroidery has become a hot research topic in the field of textiles [35]. Based on the analysis, policies based on cultural governance and standardized management factors were developed. A method to materialize digital content was developed for constructing digital archives, and the utilization of intangible cultural heritage can be facilitated [36]. Therefore, using digital means to ensure the sustainability of inheriting intangible cultural heritage is not only a practical requirement, but also a necessary path. Simultaneously, there is a need for further innovation in the mode of inheritance, including integrating intangible cultural heritage (ICHA) into modern life through creative industries and cultural products. For instance, designers can create fashion, home decor, and cultural products infused with traditional cultural elements utilizing digitized ICHA databases, thereby preserving traditional skills while catering to modern consumer preferences.

3.4.4. Cross-Regional Cooperation and Exchange

Cross-regional cooperation and exchange represent crucial strategies for advancing the transmission of intangible cultural heritage (ICHA) in traditional Chinese fine arts. Initially, cross-regional cultural exchanges can be facilitated by organizing national ICHA skills competitions and exhibitions, displaying traditional skills from diverse regions, and fostering interaction and knowledge exchange among ICHA inheritors and projects across regions. This will facilitate skill exchange and innovation among inheritors, as well as bolster the sense of identity and protection of ICHA in various regions. For instance, hosting regular national ICHA skill competitions can attract inheritors worldwide to showcase their skills, recognize exceptional inherited projects and inheritors, offer commendations and rewards, and inspire broader participation in ICHA inheritance. Secondly, regional linkage development offers an effective solution to address the uneven distribution of ICHA programs and inheritors. Establishing inheritance bases in regions with concentrated ICHA programs can extend and drive ICHA inheritance efforts in neighboring areas. For example, an ICHA inheritance base could be established in the Yangze River Delta region to showcase and teach traditional skills like embroidery, carving, and paper-cutting, drawing inheritors and enthusiasts from neighboring areas for learning and exchange. Cross-regional cooperation and exchanges enable resource sharing and synergistic development, addressing deficiencies in ICHA inheritance across various regions and fostering balanced nationwide development of ICHA [37]. This not only aids in preserving and transmitting China’s abundant cultural heritage but also fosters cultural exchanges and integration across different regions, reinforcing the sense of national cultural identity and unity.

3.4.5. Legacy Support and Incentives

Currently, the inheritance status of China’s intangible cultural heritage faces challenges, including a shortage of inheritors, discontinuity in skill transmission across generations, and the younger generation’s reluctance to engage. Therefore, providing support and incentives for inheritors is essential to ensure the intergenerational transmission of ICHA skills. Firstly, we should establish an incentive mechanism for inheritors, offer economic rewards and honorary titles to outstanding ones, and encourage more people to engage in ICHA inheritance. Particularly, inheritors from ethnic minorities require increased attention and support to ensure the preservation of their unique skills. Secondly, training programs should be established for inheritors, providing regular sessions to enhance their skills and management capabilities. These programs should encompass not
only skill enhancement but also modern management and marketing skills, enabling inheritors to better meet the demands of contemporary society. Additionally, promoting exchanges and cooperation among inheritors is crucial, fostering mutual learning and skill innovation through the establishment of networks and platforms. These measures effectively address the current challenges in ICHA transmission, ensuring the continuity of this valuable cultural heritage across generations.

3.4.6. International Cooperation and Promotion

International cooperation and promotion are vital strategies to boost the global influence of China’s intangible cultural heritage in traditional fine arts (ICHA). Firstly, we should enhance collaboration with international cultural organizations and institutions to conduct international exchanges and promotional activities for ICHA [38]. For instance, active participation in international cultural festivals, fairs, and exhibitions can exhibit China’s intangible cultural heritage in traditional fine arts globally, thereby boosting its international visibility and influence. These international platforms can not only display China’s rich cultural heritage but also facilitate cultural exchange between China and other nations, fostering better understanding and recognition of Chinese culture globally. Secondly, we should draw lessons from successful international experiences in safeguarding ICH and integrate them with China’s actual situation to devise a more scientific and effective strategy for the preservation and transmission of ICH. For instance, Japan and South Korea have amassed valuable experience and advanced practices in safeguarding ICH, effectively preserving and inheriting their cultural heritage through legislative protection, the establishment of inheritance systems, and educational initiatives. China can draw insights from these successful experiences and integrate them with its cultural characteristics and circumstances to develop a tailored strategy for the preservation and transmission of ICHA suited to its national conditions. Moreover, it should advance international cooperation and research on ICHA by inviting international experts to participate in the protection and research of ICHA in China, thereby enhancing the scientific rigor and effectiveness of ICHA preservation in China through the adoption of advanced international research methods and technologies. International cooperation can introduce advanced conservation concepts and technologies, elevating the conservation standards of ICHA in China. Concurrently, Chinese ICHA inheritors and researchers are encouraged to engage in international academic exchanges and cooperation, gaining insights from international advanced conservation practices to enhance their professional expertise.

4. Discussion

4.1. Overall Spatial Distribution of ICHA Projects

From the perspective of the nearest neighbor index, ICHA projects exhibit a spatial aggregation model, while Moran’s I index suggests no significant spatial correlation among ICHA projects. Analyzing the spatial and density analysis chart, with Beijing and Shanghai serving as high-density core areas, various types of intangible cultural heritage in China show distinct patterns. Given Beijing and Shanghai’s roles as global economic, political, and cultural hubs, as well as high-density core areas, it is evident that politics, economics, and culture play crucial roles in shaping ICHA. Nationally, there is a notable disparity in core density between the central and western regions, resulting in significant spatial distribution imbalance. In the east, prominent regions include the Beijing–Tianjin–Hebei, Yangtze River Delta, and Pearl River Delta areas, while the Chengdu–Chongqing region stands out in the central part. The distribution of traditional art-related intangible cultural projects closely mirrors that of intangible cultural projects nationwide, with a stronger presence in the eastern and central regions compared to the west.

4.2. Characteristics of ICHA Projects with Different Factors
The spatial core density zones vary across each classification type. For embroidery, the core density area is at the junction of Shanghai and Hunan–Guizhou; for sculpture and carving, it is in Shanghai; for Paper Cutting, it is in Jiangsu, Zhejiang, Shaanxi, and Ningxia; for calligraphy and painting, it is in Sichuan and Beijing; and for handicraft, it is in Beijing. Among the six classification levels of projects, including the national, provincial, municipal, county, autonomous prefecture, and district levels, there are predominantly 192 and 153 projects at the city and county levels, respectively, accounting for 82.74%. Regarding the spatial distribution across the ten major cultural zones, ICHA project sites are concentrated in the Jiangnan Water Town and North China Plain zones, while the Xinjiang Desert Oasis, Inner Mongolia Grassland, Qinghai Tibet Plateau, and Northeast Black Soil Zones are large and scattered. In Wu Qing’s study on the spatial distribution and causes of different types of intangible cultural heritage in China, national intangible cultural heritage projects were concentrated in the eastern cultural zone, whereas the northwest regions, such as Xinjiang, Inner Mongolia, Qinghai Tibet, and Northeast China, were characterized by sparse cultural zones [19]. ICHA projects span 32 provinces and municipalities across China, with only Hong Kong and Taiwan lacking any projects related to national intangible cultural heritage [6]. The quantity was categorized into five levels, with Guangdong, Jiangsu, Zhejiang, Shandong, and Sichuan provinces having the highest amount, falling into the first level. The distribution of ICHA projects varies unevenly across the 10 cultural zones and 32 provinces. Out of the 417 ICHA projects, there are a total of 88 ethnic minority projects and 329 Han Chinese projects. In contrast to the national ICH, where Han ethnic projects constitute 43.38%, the proportion of ICHA Han ethnic projects has surged to 78.9%, mirroring the distribution of national ICH projects. Ethnic minority projects encompass 18 ethnic groups, displaying relatively scattered types and quantities. Some ICHA projects in the central and eastern regions coexist with the Han ethnic group, a distribution pattern shaped by the long-term historical interaction and flow of various ethnic groups, consistent with the distribution characteristics of various ethnic groups in China, which are characterized by large scatterings, small concentrations, and mixed settlements [39]. The distribution of ICHA projects at various levels, provinces, and cultural zones in China is uneven. Similar to the distribution of ICH nationwide, ICH projects are mainly distributed in the developed coastal regions in the east, are most concentrated in the Middle and Lower Yangtze Valley Plain, and are relatively rare in the west.

4.3. Characteristics of ICHA Project Inheritors with Different Factors

Intangible cultural heritage constitutes a “living” cultural form primarily sustained through the practical activities of its inheritors. Relevant studies indicate that every minute, a cultural relic is lost, and folk art faces extinction. Out of the 417 ICHA projects, 148 have no inheritors, constituting 35.5% of the total. Additionally, 203 projects have one inheritor, and 66 projects have two or more inheritors, totaling only 377 inheritors. The high-density core area of national ICHA projects, centered around Beijing, contributes to the dilution of the core concentration in the distribution of ICHA projects with single or multiple inheritors. Handicraft projects have the highest number of inheritors, whereas calligraphy and painting projects have the highest number of projects without inheritors. The number of inheritors varies for each project, with the highest count being eight, seven, and six, yet each project only has one inheritor. Three projects have inheritors from both Han and ethnic minority communities due to the coexistence of these groups in certain areas. In the 269 ICHA projects with inheritors, ethnic minorities exhibit a relatively high proportion of inheritors in the embroidery and calligraphy and painting categories. Notably, the Tibetan ethnic group boasts a calligraphy and painting project, Regong Art, with seven inheritors. The majority of inheritors are from Han ethnic projects, with sporadic representation from minority projects. However, the scarcity of inheritors presents a significant inheritance crisis. The Jiangnan Water Town Cultural Zone, with the highest number of ICHA projects, also exhibits the highest number of projects with inheritors, contrasting...
with the Inner Mongolia Grassland Cultural District in the north. Among the 148 ICHA projects without inheritors, 115 belong to the Han ethnic group, with the remaining 33 classified as ethnic minority projects. ICHA projects of the Shui and Buyi ethnic groups no longer have any inheritors. Although there are few national and provincial ICHA projects, only one of them has an inheritor, indicating a severe inheritance situation. The nuclear density area of ICHA projects centered around Beijing overlaps with the area lacking project inheritors. Hence, fostering ICHA inheritors is crucial for the sustainable development of intangible cultural heritage.

4.4. Sustainable Inheritance Strategy

The rising global economic prosperity poses various challenges to the protection and sustainable development of ICH. Notably, the transmission of traditional handicrafts from master to apprentice faces significant obstacles [5]. Ensuring the inheritance of ICH is a fundamental principle outlined in the Intangible Cultural Heritage Law of the People’s Republic of China for safeguarding intangible cultural heritage. Inheritors of ICH at various levels not only preserve traditional culture but also play a crucial role in ensuring its enduring inheritance [2]. In China, ICH education has been integrated into the national education system. The Suzhou Embroidery project in the Jiangnan Water Town Cultural Zone exemplifies successful inheritance through educational initiatives. Leveraging ICH for tangible purposes can significantly boost tourism appeal [40], while concurrently promoting the inheritance and dissemination of traditional culture [15]. Integrating ICH with the tourism industry is viewed as a viable mechanism for supporting and preserving this heritage [41]. Siow Kian Tan analyzed Georgetown and Malacca in Malaysia as case studies to explore the “human-land integration” elements that could enhance ICH sustainability and promote tourism [42]. Integration with scenic areas can facilitate the development of novel tourism forms focusing on themes related to intangible cultural heritage, such as deep tourism, non-relic inspection tours, and intangible cultural heritage research tours. Although the overall foundation of ICHA projects in the western Qinghai–Tibet Plateau cultural region is relatively weak, the integration of Huangnan Regong arts and tourism has paved a unique path for ICHA sustainability. Digitization plays a pivotal role in the inheritance of intangible cultural heritage, not only enhancing its social visibility and expanding the market for related products, but also innovating the concept of heritage protection and inheritance [43]. Digitization assists in various aspects of intangible cultural heritage derivatives, including design, research and development, and production, facilitating knowledge generation and experience transfer in protection and inheritance [44]. The protection and inheritance of ICHA are inherently public. As an integral aspect of national public culture, government-led top-down management and services are essential to address the challenges of ICHA inheritance. As stakeholders of ICHA, the public and inheritors comprehend the institutional framework of ICHA and engage in relevant cultural practices from the grassroots to policy levels. The nuclear density zone of the ICHA projects centered around Beijing is also a non-heritage nuclear density zone of the ICHA projects, highlighting the need for national attention to project protection. Research findings suggest that education, tourism, and digital communication hold promise as strategies for safeguarding and perpetuating China’s ICHA. Ching Yi Wang explored educational strategies for safeguarding Indian wax dyeing ICH through observation, interviews, and literature analysis, concluding that ICH education should be contextually relevant to societal needs and everyday life. Successful ICH preservation requires collaborative efforts from industry, government, educational institutions, and research bodies [45]. Simultaneously, establishing a sustainable inheritance pathway that integrates government, education, tourism, and communication, while making timely adjustments and optimizations, is essential for the effective protection and perpetuation of ICHA.

5. Conclusions
This paper analyzes the spatial distribution of ICHA items and their inheritors, utilizing methods such as the nearest neighbor index, Moran’s I index, kernel density, geographic concentration, and the imbalanced index. Additionally, strategies for inheriting these 417 ICHA items are explored. Analysis reveals that 417 ICHA items exhibit spatial aggregation, with no significant spatial correlation observed among their distributions. Beijing and Shanghai emerge as the core density regions in the national distribution. Secondly, a disparity is observed in the distribution of ICHA projects across various types, levels, provinces, and cultural zones in China. Regarding the ethnicity of the projects and their inheritors, ICHA projects predominantly involve the Han ethnic group, which exhibits a relatively scattered distribution throughout the country. Han ICHA projects and inheritors are concentrated in the central and eastern regions, while minority ICHA projects and inheritors are prevalent in the central and western regions. Thirdly, among the project inheritors, 148 ICHA projects lack inheritors, 203 have a single inheritor, and only 66 are inherited by multiple individuals. Shanghai serves as the core density region for 269 ICHA projects with inheritors, while Beijing fulfills this role for 148 ICHA projects without inheritors. Out of the 148 ICHA projects lacking inheritors, 115 involve Han Chinese groups, with 33 distributed among 16 ethnic minorities, and 2 lacking any inheritors. The aforementioned findings highlight the uneven distribution of ICHA projects and the looming crisis of their inheritance. This study suggests that education, tourism, and digitization can serve as potential tools for inheritance. Supporting and incentivizing inheritors are crucial for conservation efforts, while international cooperation and promotion can enhance the scientific rigor and effectiveness of ICHA conservation in China. Moreover, establishing a sustainable inheritance pathway integrating government, education, tourism, and communication is essential for realizing the effective inheritance of ICHA.

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