

Funding Climate Change Haven Communities across the Political Spectrum: From Free-Market Capitalism to State-Directed Economies

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Abstract

We examine possible funding sources for constructing Climate Change Haven Communities on a global basis. Areas of the planet that have the potential to house persons migrating to “safe havens” in their own or other countries will require the rapid construction of communities capable of supporting them, their families, businesses and farms. However, different political-economic conditions are found across the areas which can serve as locations for these Climate Change Haven Communities. We develop funding and construction strategies for the United States (free-market capitalism), France and Spain (European Union supported economies), and Taiwan region (state-directed economy). The proposals for the Taiwan region should also be applicable to the rest of China.

Keywords

Climate Change Haven Communities, European Union, France Climate Change, Spain Climate Change, Taiwan Region Climate Change, United States Climate Change, Free-Market Capitalism, Industrial Revolution, State-Directed Economies

1. Introduction

The year 2025 is now here. Notably, the Industrial Revolution began in Britain 250 years ago [1]. With the transition from human and animal labor to large-scale, mechanized production came the need for alternative energy sources, initially coal

and subsequently petroleum and natural gas, the so-called *fossil fuels*. With these much more efficient energy sources, the global economy grew exponentially [2]. Now, two and a half centuries later, we are projected to reach uninhabitable levels of climate deterioration due to the overuse of these same fossil fuels. Droughts, excessive heat, floods, and sea level rise in several areas of the world are estimated to make large portions of the globe uninhabitable by 2030-2035 [3].

Fortunately, there are sufficient areas of the planet that will remain comfortably habitable, or become habitable, to house most of the human population that will soon be displaced [4]. These Climate Change Havens are primarily located in the Northern Hemisphere, although the Southern Hemisphere will also have large habitable regions, especially in the mountainous areas of South America, as shown in **Figure 1** [4].

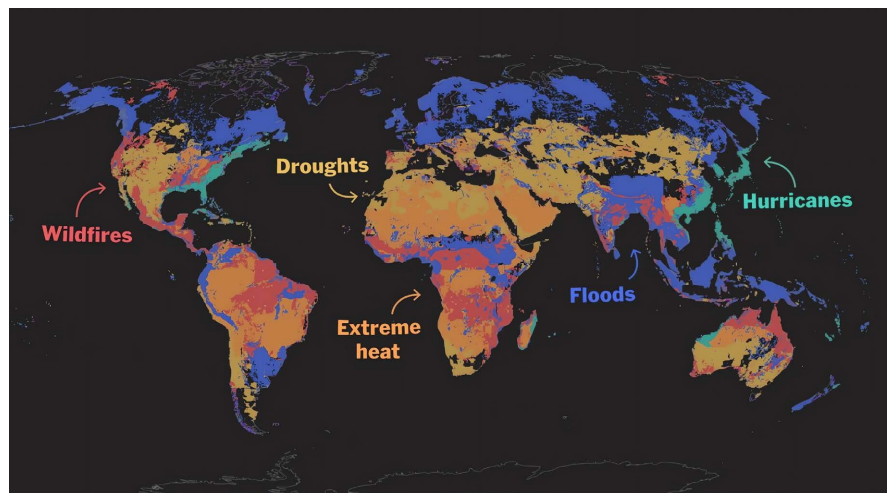


Figure 1. Forecast climate change threats for 2030-2035.

There are published plans for constructing Climate Change Haven Communities that can be built in each of these safe areas [5]. The problem confronting us now is one of the political and economic hurdles that have not been addressed. We propose that because of their political-economic structures, some countries in “safe” areas of the planet will have an easier path to safeguarding their own residents and incoming migrant populations, whereas other countries will find it difficult to respond to the financial and cultural requirements of constructing Climate Change Haven Communities in their safe haven areas. Just as the economies of the world were dramatically altered by the Industrial Revolution, the political structures of the planet have been radically re-aligned as well [6]. Some countries now have political-economic systems that will make the construction of Climate Change Haven Communities possible within the 5-year time span required. However, other countries have political systems that will make it difficult to create Climate Change Haven Communities in time to transfer most of their at-risk population. We anticipate that by 2030-2035 the global economy will likely have become disrupted by climate change to the extent that these latter countries’ internal

financial markets will be unable to support the necessary construction efforts. These countries, which include most prominently the United States, are now in an essentially “do or die” moment.

To illustrate this proposition, we examined the current plans for constructing Climate Change Haven Communities in four countries which differ in their political-economic philosophies. One, the United States, has just re-elected former President Donald Trump to another four-year term which begins in 2025. Trump has voiced the view that climate change is essentially a “hoax” and that attempting to respond to it is a waste of national economic resources [7]. Given this position, it will likely be necessary to locate private entrepreneurial financing for any Climate Change Haven Communities constructed in the United States.

Spain and France lie at the midpoint of the political-economy spectrum. They are members of the European Union and have adopted the EU policy of open borders for both travel and economic trade with other members of the EU. They also share a common currency, the Euro [8]. Politically, most of the EU members also have economies that blend social welfare with capitalism [9].

We believe that the EU theme of “working together to achieve shared goals” should enable both France and Spain to construct Climate Change Haven Communities with some financial assistance from other EU members [10]. Climate change preparations in France and Spain will be discussed at length in sections below.

At the far-left end of the socio-political spectrum, we propose that the Taiwan region and China are in many ways the countries best equipped politically and economically to be able to construct Climate Change Haven Communities for their residents within the necessary time frame. They have a strong sense of communal and cultural welfare, centralized governments and strong economies [11]. As will be discussed in a section below, we believe this will enable the maintenance of economic prosperity and social cohesion, while responding effectively to the necessity of moving large segments of the population to Climate Change Haven Communities as weather conditions deteriorate.

2. What Are Climate Change Haven Communities?

The idea of Climate Change Haven Communities was introduced in the early 2020s as a concept for addressing the need to re-locate residents currently living in endangered parts of the Continental United States to areas within the country that would not be seriously harmed or even be improved in habitability by the advent of climate change [5] [6]. The two regions that have now been discussed as Climate Change Havens include the Appalachian Mountain Range, stretching from Tennessee and North Carolina to New York state, Vermont, western Massachusetts, and western Maine [6]. The mountains will serve as a buffer against debilitating storms and temperature extremes, but must first be equipped with flood control measures before Climate Change Haven Communities can be built in them.

The second area of the Continental United States that can serve as a Climate Change Haven is the **Northern Tier** of states running from Washington State in the west along the northern US border with Canada eastward to New York State and Maine. These states will be experiencing warmer temperatures and longer growing seasons [6]. However, flood control measures will also have to be taken prior to the movement of large numbers of US residents to this area, just as in Appalachia [6]

The Climate Change Haven Community Model

The illustration below shows the basic layout for a Climate Change Haven Community appropriate for the terrain found throughout Appalachia and Northern Tier of the United States. Electricity is provided by hydro-power generators placed on adjacent rivers, lakes and/or reservoirs. Appalachia and the Northern Tier have abundant water resources which can support populations of 20,000 to 30,000 persons in a Climate Change Haven Community using a moderately-sized hydro-power electric generator. These will cost approximately \$6,000,000 per community to install and will have minimal maintenance requirements over the following decade [5]. This will enable each CCH community to be energy independent.

Housing in the CCH community will be eco-sustainable, as will the buildings used to provide administrative, educational, shopping, childcare, medical/dental and business services. The structures will be primarily modular in construction, which will result in lower energy costs, greater durability and permit more rapid installation [6]. A low-to-no cost electric bus service will be provided to community residents to transport them to various areas in the town. Only electric vehicles will be permitted within the premises of the community; power to re-charge these vehicles will be provided on a low-to-no cost basis using the hydro-electric power system [6].

Each community will be equipped with its own AM radio station which can be used to communicate with residents [6]. Residents over age 16 will be provided with AM receiver/transmitters (similar to a cell phone) which will enable them to be notified of emergency situations (e.g., fires, floods) and also to communicate with emergency personnel to report incidents of concern [6]. This system will overcome the limitations of normal cell phone and internet service in cases of system hacking or sabotage on a regional or national level.

Alaska can also serve as a viable locale for Climate Change Haven Communities, because it too will experience a more temperate climate with longer growing seasons to support agriculture. However, the coastal areas of Alaska will become more hazardous as sea levels rise and oceanic storm intensity grows [12].

In the process of developing these ideas for the United States, research articles also addressed the global locations of potential Climate Change Haven Communities [6] and identified specific countries (e.g., Scotland, Northern Ireland, Greenland, Iceland, Denmark, Sweden, Norway, Germany, Austria, Lithuania)

which could serve as locations for Climate Change Haven Communities. Most of these countries are concurrently members of the European Union and therefore may be open to the resettlement of EU residents from southern Mediterranean countries such as Italy.

In the present research we will discuss the actions that two EU countries on the Mediterranean Coast—Spain and France—are taking to shelter residents in Climate Change Haven Communities within their own national borders. Three of the present research authors are residents of Spain, and one author is a resident of France. Our prior research has not addressed either China or Taiwan region directly. In this report we use the Taiwan region as a proxy for both since they are similar in history, ethnic population composition and geographic location. One of the authors of the present study is a resident of the Taiwan region.

As shown below in **Figure 2**, each Climate Change Haven Community will be surrounded by organic and/or eco-sustainable farms. These local farms will supply the majority of foodstuffs for the community, reducing the need to bring in food supplies by petrol-powered trucks or trains, and provide a much healthier diet for residents with minimal packaging waste.

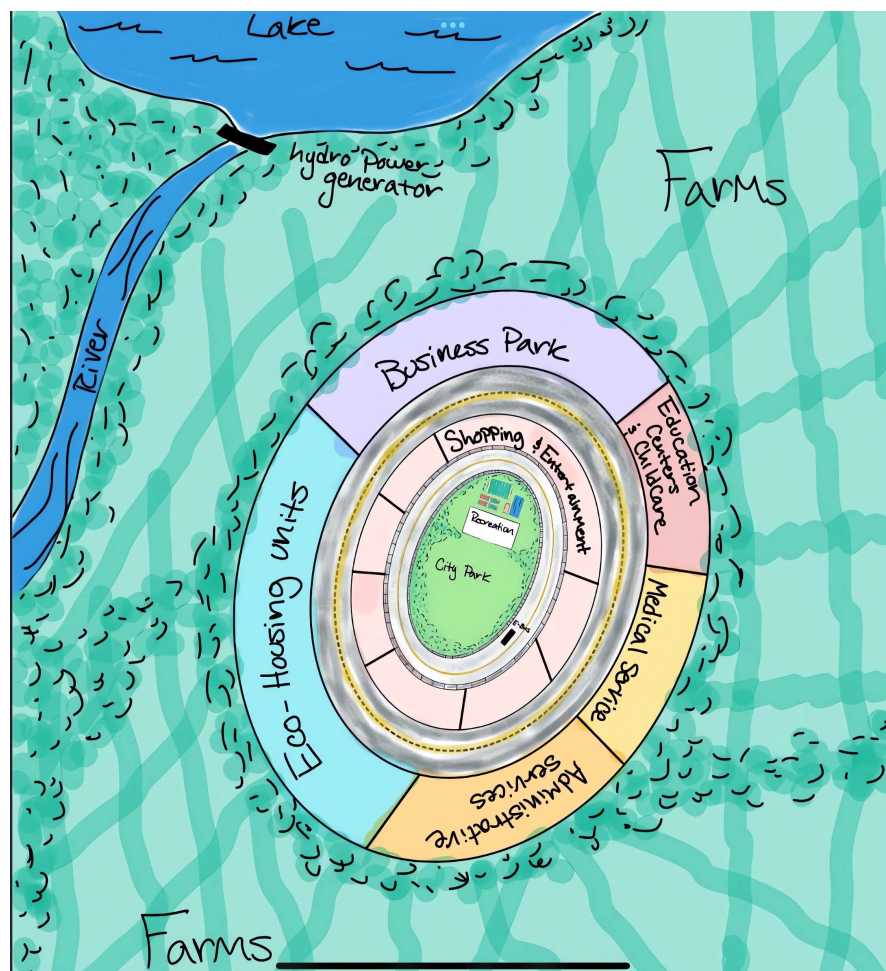


Figure 2. Climate change haven community. copyright ruth ann kennedy and Virginia.edu.

The proposed CCHC development plan will take between three to five years to fully implement. Therefore, actions must be taken immediately in order to ensure the Climate Change Haven Communities are ready to accommodate the anticipated large-scale migration to the area.

As an example, within the US state of Virginia, there are 36 mountainous counties that can be used as Climate Change Havens. Each county would contain two or three Climate Change Haven Communities. Allowing 25,000 new residents per community, this will enable 2,250,000 persons to relocate to Virginia. In each of these counties, we have already prepared plans to expand two to three existing towns into Climate Change Haven Communities.

Because these towns have existing educational and administrative services in place, their expansion will be much more efficient than attempting to establish new towns from scratch. Additionally, each of the towns has nearby water resources which can support the installation of hydro-power generators sufficient to support the Climate Change Haven Community of 20,000 to 30,000 persons. We are assuming 5000 local residents will be housed in each community, bringing each community total to 30,000 persons.

The plans developed for the state of Virginia are believed appropriate for transfer to the other states in the Appalachian Region. For the construction of Climate Change Haven Communities across the Northern Tier of the United States, however, modifications will be required to accommodate increased flooding risks in the states bordering the Great Lakes, e.g., Michigan, Wisconsin, New York, Minnesota). This will likely increase the cost for those communities located adjacent to the lakes.

3. Why the United States Will Require Entrepreneurial Funding to Construct Climate Change Havens

Although the United States' motto is "e pluribus unum", *one from many*, it functions largely as a set of regional cultures, each with its own history. The Deep South—Louisiana, Mississippi, Alabama, Georgia, and South Carolina—still carries the racial animus of slavery [13].

Texas was also a "slave state" and additionally has a history of hostility toward Mexico and the Spanish-settled countries below it, due to its own War of Independence from Spain in 1836. Texas did not join the United States until 1845, and some residents still see themselves as independent from the Federal Government [14].

Florida was initially settled by the Spanish in 1513 who then subsequently lost the territory to the United States in 1821. The state currently has a population that is heavily Spanish in ancestry, especially refugees who arrived in the 1960s from Cuba, and more recently from Mexico and South America [15].

The Appalachian states of Tennessee, North Carolina, Virginia, West Virginia, Kentucky, and Western Pennsylvania are rural, mountainous and—until the past century—made their living primarily through tobacco cultivation and coal

mining. The residents are primarily Protestants of European ancestry [16].

The American Midwest states of Illinois, Ohio, Nebraska, Kansas, Missouri, Idaho, and Iowa are sparsely populated, politically conservative and have economies based on large-scale agriculture. Residents are primarily Protestant of European descent [17]. The Far Western states of Wyoming, North Dakota, South Dakota, Montana, and Colorado are also sparsely populated and politically conservative. Most residents are ranchers and many are descendants of the initial settlers. The population is primarily white and Protestant, although there is also a strong Native American presence [18].

The Pacific Northwest states of Oregon and Washington were initially settled by White fur traders and joined the United States in 1859 and 1889, respectively. Most residents today are of European descent, Protestant and live in rural communities [19].

California is a remarkable exception in many ways to the above pattern of colonization in the history of the United States. Originally settled by the Spanish in 1769, California's culture was altered dramatically in 1848 with the discovery of gold ore deposits. The ensuing Gold Rush brought not only prospectors, but also speculators, merchants, and financial entrepreneurs [20]. In the span of a few years, over 300,000 persons migrated to California from across the US and from several western European countries (e.g., Ireland) to seek their fortunes in this new state [20]. California joined the Union in 1850, becoming the 31st state.

During the late 1800s and early 1900s, Eastern European immigrants (often Ashkenazi Jews) who had recently arrived in New York City, trekked to California and initiated the motion picture industry, using California's warm, dry climate to shoot inexpensive films, especially "westerns". This new technology, together with the entrepreneurial drive of those already in residence, caused California to become a lantern for creative, maverick entrepreneurs and investors over the following decades [21]. As a result, California's current culture is a multi-ethnic, multi-lingual, multi-religious hodgepodge of diversity [22].

The Current Status of Federal Funding for Climate Change Response.

The Biden Administration made efforts over the past four years of its tenure to mitigate the US contribution to climate change [23].

Although these efforts were well-intentioned, they were largely ineffective in altering the course of climate change, either globally or nationally. The year 2024 saw a record number of flooding events, hurricane damage, droughts, forest fires and landslides due to climate change in the United States [24]. Thus, the outlook remains unimproved for the most critical regions of the country. Residents in climate-impacted areas of the Southeast, Southwest, Texas, Florida and California must move within the next five years or they will lose not only their homes and businesses, but likely their lives.

With the second term of Trump as US President now beginning in 2025, it is unlikely that additional funding for climate change response will be forthcoming; indeed current programs are likely to be eliminated [25]. This leaves the option

Americans have historically been very good at—private entrepreneurship, especially when the potential financial rewards are enormous.

We believe that the best opportunity for relocating the residents and companies in climate-impacted areas would be for the primary businesses and agricultural operations located there to begin negotiations with large-scale real estate developers in areas of the country that will be safe to move to, for example Western Pennsylvania, Western New York State, the Upper Peninsula of Michigan, the Virginia Highlands and Idaho.

Concurrent with these negotiations, companies and agriculturalists desiring to move should make efforts to introduce themselves to current residents of the communities they will be joining. Every effort should be made to ensure that their arrival will be viewed as a desirable event by those already living in there. Prior research papers have already addressed some of these issues [6]. A series of “meet and greet” events would be very desirable to ensure the existing communities’ full support.

There are a multitude of ethical issues inherent in this plan, however. What if the receiving state or region does not want persons of particular faiths, ancestries or races to come to their “territory”? How will this be negotiated? How can Americans learn to broaden their views of who will be a desirable neighbor?

An even larger ethical issue is what will happen to persons living in climate-threatened areas who do not work for major corporations or agricultural enterprises capable of transferring them to a safe location, as well as persons who are retired, infirm, or impoverished? It is doubtful, given the past and current record of the United States government, that monies will be made available to help move these citizens to a safe location.

During the economic Great Depression lasting from 1930 to 1938 in the US, for example, there were inadequate Federal funds for re-settling and supporting the hundreds of thousands of displaced persons [26]. Similarly, the Dust Bowl Era between 1930 and 1936 displaced hundreds of thousands in the Midwestern US states [27]. In both these prior instances, the US Federal government did not provide sufficient financial or transportation support to these citizens.

At present, FEMA, the US government agency responsible for assisting those impacted by climate-related disasters, has inadequate resources to fully compensate those residents in California, Texas, Georgia, Tennessee, North Carolina and Florida who lost their homes, businesses and farms in 2024 [28]. Because of these uncertainties, it is difficult to foresee a highly positive outcome for the United States economy and society post 2030.

We turn now to a consideration of the impact of climate change on two members of the European Union: France and Spain.

4. Climate Change and the European Union

The European Union is a geo-political entity created in 1993 that currently includes a large portion of the European continent. The EU was created through

numerous treaties and has undergone expansions and secessions that have taken it from an original six member states to 27 at the present time; the EU now includes a majority of the states in Europe [29].

In December 2019, the EU put forward the *European Green Deal*, a package of measures intended to enable the EU to become carbon neutral by 2050. These measures, accompanied by a chronological set of actions, ranged from cuts in greenhouse gas emissions, to investing in climate protection research and technological innovation, while preserving Europe's natural environment. Supported by multi-country investments in eco-sustaining technologies, the Green Deal also aims to transform the EU into a sustainable, competitive economy. The participation and commitment of EU residents and of all business and governmental stakeholders will be crucial to its success [30]. In the present research we examine the actions being undertaken by two of the EU members—France and Spain.

Among the key proposals under the Green Deal is the European Climate Law [31] which is intended to ensure reaching climate change neutrality among its members by 2050. Specifically, the proposal requires cutting GHG emissions at least 55% from their 1990 levels. Other proposals include the Sustainable Europe Investment Plan and the European Climate Pact; proposals for regulations establishing the Just Transition Fund and revising the guidelines for trans-European energy infrastructure [32].

Because both France and Spain are signatories to these climate change and economic goals, they share a common purpose with their other EU member states to do what is necessary to ensure the economic survival of the EU, as a whole, as well as supporting the welfare of one another during the next difficult decades. Notably, this posture differs from the conditions found in the United States where individual states are not under any obligation to support the welfare of other states or indeed obligated to support the Federal Government, other than to pay taxes. The US Federal Government is assigned the tasks of responding to emergency events, military defense and operating the Federal justice system (see Footnote 1). Thus, if there is insufficient Federal funding to respond to climatic damages in a given state or set of states, no other recourse is available.

We now put forward the set of Climate Change Haven plans developed for France.

4.1. France

France, the second-largest economy in the European Union (after Germany), is characterized by a diverse set of industries, strong global financial links, and major agricultural exports [33]. In 2023, France's nominal GDP was \$2.7 trillion, making it the seventh-largest economy globally. However, the nation of 66.5 million persons faces significant challenges, ranging from unemployment and slow growth to rising public debt [34].

4.1.1. France Key Economic Sectors

The services sector is the backbone of the French economy, with notable

contributions from financial services, tourism, healthcare, and retailing. Paris, one of the largest financial centers in Europe, houses a high concentration of banks, investment firms, insurance companies, and financial regulatory bodies. France is also the world's leading tourist destination, attracting over 89 million visitors per year which generates substantial revenue. Like several other EU countries, France has a universal healthcare system that ranks among the best globally. The education system is robust, with a strong emphasis on public schooling and higher education [35].

France currently is a global leader in high-tech manufacturing, with industrial strength in aerospace (Airbus), automobiles (Renault, Peugeot), and luxury goods (LVMH, Chanel). These industries continue to be significant contributors both to exports and employment [35].

The country is also a major producer of nuclear energy, which now supplies around 70% of its electricity. France is also investing heavily in renewable energy, aiming for carbon neutrality by 2050 [36].

France is the largest agricultural producer in the European Union and the third-largest food exporter globally. Therefore, maintaining their agricultural sector productivity during climate change must be a key aspect of French planning. Key French agricultural exports include wine, cheese, cereals, and meat. Wine production is especially important to the French economy, with Bordeaux, Champagne, Burgundy, and the Loire Valley regions being some of the most prominent wine-producing areas globally. This sector alone contributes approximately €14 billion to the national economy annually [37].

France is currently experiencing some economic challenges. Among these are high unemployment, especially for younger citizens, as well as some less productive regional industries and rural areas [38]. Additionally, the country's public debt is nearing 120% of GDP, which is among the highest in the EU. This poses significant challenges for long-term economic stability and fiscal policy [39].

4.1.2. The Challenges of Climate Change in France

Climate change has intensified the frequency and severity of droughts, particularly in southern France. The Mediterranean region, known for its agriculture, has seen decreasing rainfall and longer dry spells, most notably in areas like Provence-Alpes-Côte d'Azur and Languedoc. The coastal regions of Normandy, Brittany, and parts of the Loire Valley are increasingly vulnerable to flooding and erosion as sea levels rise. These areas therefore face increased risks to agriculture and infrastructure. Southern France is especially vulnerable to heatwaves, such as those experienced in the summer of 2003, which claimed 15,000 lives. These extreme temperatures could affect crop yields, particularly for wine grapes, olives, and cereals.

In response to these climatic challenges, France is pioneering agroecology—a sustainable farming approach focused on biodiversity, reducing pesticide use, and

maintaining soil health. The country is also investing in eco-agriculture to mitigate climate impacts, such as using drought-resistant crops and water-efficient irrigation systems [40].

The French government, together with the EU, also provides various subsidies and grants to support farmers during times of crisis. These support programs have expanded in recent years to assist farmers transitioning to more climate-resilient practices [40]-[44].

4.1.3. France Migration Issues and Climate Change

Many of France's colonial efforts during the 1800s were focused on North Africa, which is predominately Muslim in religion [45]. Migrants from these former colonies have made their way to France in increasing numbers over the past two decades. As a result, France's current political landscape is characterized by religious tensions that influence domestic policies and the country's approach to immigration.

For example, France's current commitment to *laïcité* (secularism) has created ongoing tensions around the role of Islam in public life. Issues such as the wearing of the hijab, the construction of mosques, and debates on Muslim migrant integration into French society have led to significant cultural and political friction, especially as the Muslim population in France continues to grow [46]. A significant portion of the French public remains divided on immigration levels and the cultural integration of these Muslim populations, particularly in urban areas with large immigrant communities like Paris's **banlieues** (suburbs) [46].

Tensions between these Muslim minorities and the French police have occasionally boiled over into protests and riots. Muslim communities, especially in the banlieues, face economic exclusion, high unemployment, and a lack of opportunities, exacerbating social tensions. Young people from these backgrounds often experience limited access to education, housing, and employment, which can lead to the public perception that they are a drag on the economy [46].

As a result, there has been a rise in right-wing political movements advocating for stricter immigration controls. Conservative parties such as Marine Le Pen's National Rally and Éric Zemmour's Reconquête have amplified these anti-immigrant sentiments. They argue that immigration poses a threat to French identity. Conversely, left-wing and pro-immigrant groups advocate for more inclusive policies, especially for political refugees and climate change migrants [47] [48]. These difficult issues will have to be directly dealt with as France seeks to grapple effectively with its climate change challenges.

4.1.4. Identifying Climate Change Havens in France

As climate change accelerates, certain areas in France are emerging as potential Climate Change Havens, while others are becoming uninhabitable. Although southern France—including regions such as the Provence-Alpes-Côte d'Azur and Languedoc-Roussillon—has long been known for its mild Mediterranean climate,

the area is now increasingly facing droughts, heatwaves, and water scarcity (see **Figure 3**). The arid conditions in places like Marseille and Nice are leading to growing concerns about water management, agricultural sustainability, and urban livability [49].

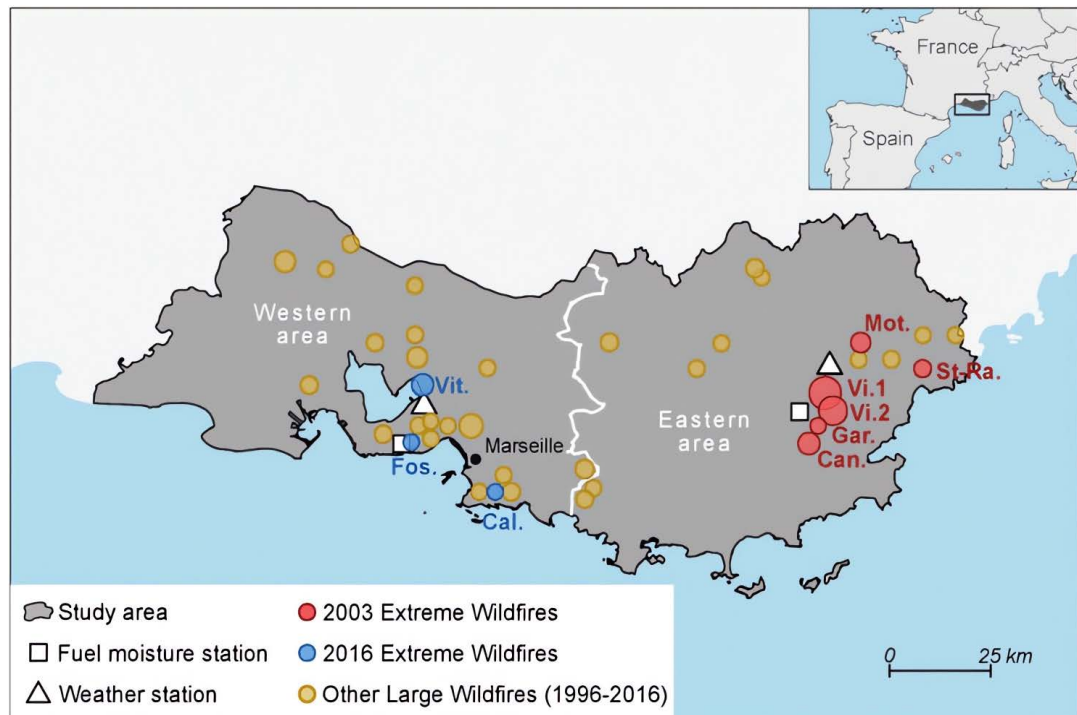


Figure 3. Climate-endangered areas of France.

Traditional crops such as grapes and olives are at risk in these hotter, drier conditions. Wine production also is now shifting northward, as temperatures in Bordeaux and the Loire Valley become more favorable. The Mediterranean coastline, particularly the French Riviera, has now become highly vulnerable to sea level rise. Cities such as Cannes and Nice are at risk of flooding and property damage from rising seas [50].

Fortunately, Brittany's climate is becoming more suitable for growing these crops, as is the Loire Valley (see **Figure 4**). The Loire Valley is historically known for its wine, as well as fruit and vegetable production. With the ongoing warming of southern France, the Loire Valley will likely see an increase in agricultural production. It is also projected to become an attractive area for displaced farmers from more vulnerable regions [51]. For these reasons, the French government is currently investing funds to upgrade the infrastructure of both Brittany and the Loire Valley [52]. This will also provide an economic benefit to these rural areas, as they receive an influx of people seeking more affordable living conditions, particularly in areas with sustainable agricultural opportunities. Many agricultural businesses are expected to relocate to northern France as the changing climate makes farming untenable in the hotter, drier areas.

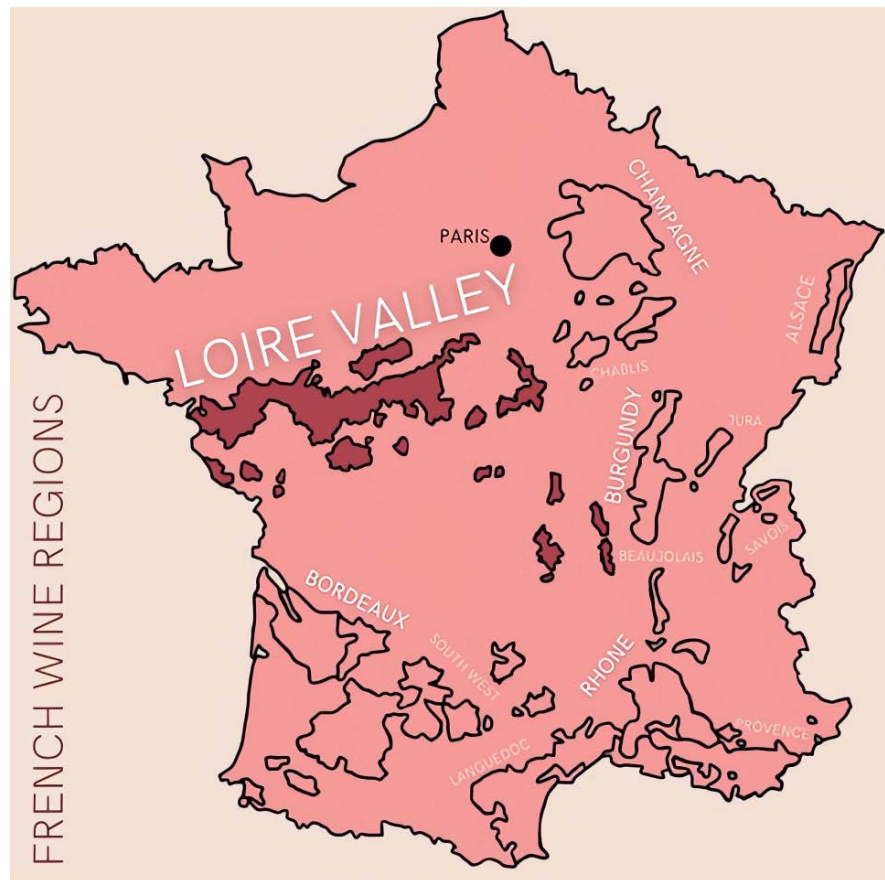


Figure 4. Wine-growing regions of France.

4.2. Climate Change Response in Spain

Spain is now experiencing significant climate change effects that are reshaping the habitability of its regions and creating new challenges and opportunities for its population, businesses, and agriculture. Rising temperatures, increasing droughts, and shifting rainfall patterns are rendering some areas, particularly in the south, less habitable, while the northern regions are emerging as potential Climate Change Havens [53].

In the southern regions such as Andalucía, Murcia, and Extremadura, the climate has become increasingly hot and arid, as shown in **Figure 5**. Temperatures have risen by over 1.5°C in recent decades, leading to prolonged droughts and reduced water availability. Agriculture, a major economic activity in the region, is now under threat, with traditional crops such as olives, almonds, and citrus struggling to survive. Desertification is expanding, and the risk of these areas becoming uninhabitable by mid-century is growing [54].

The central zones, including Castilla-La Mancha, Madrid, and Aragón, face similar challenges. Rainfall has become erratic, leading to water shortages, declining crop yields, and increased pressure on the urban infrastructure. Heatwaves are more frequent, putting a strain on existing energy resources and making cities less habitable during the summer months [54].



Figure 5. Forecast climate change in Spain.

In contrast, the northern regions, such as Galicia, Asturias, Cantabria, País Vasco, Navarra, and northern Castilla y León, now offer milder climates, abundant rainfall, and fertile soils. These areas are less vulnerable to the negative impacts of climate change and can provide viable residential alternatives for the Spanish population, as well as economic relocation. However, shifting the Spanish population to this area from the southern regions requires careful planning to ensure sustainability and social cohesion. These are discussed in detail below on a region-by-region basis. These plans are part of the national strategy being developed for Spain by the current government in conjunction with the EU [55].

4.2.1. Galicia

Galicia, located in northwest Spain, will continue to be characterized by a temperate maritime climate with regular rainfall and fertile land. These conditions make it ideal for agriculture, forestry, and sustainable development [55].

Galicia has the potential to accommodate approximately 500,000 new residents and support the establishment of around 10,000 new farms. These would focus on dairy production, organic farming, and agro-forestry practices. Urban centers such as A Coruña and Vigo will expand their capacity to host businesses specializing in renewable energy and sustainable industries.

4.2.2. Asturias and Cantabria

These regions will continue to feature lush green landscapes due to their proximity to the Cantabrian Sea. Thus, they offer significant opportunities for the expansion of both agriculture and aqua-culture. Asturias and Cantabria can absorb up to 300,000 new residents, collectively, and foster 8000 new agricultural enterprises, including livestock farming and vegetable cultivation. Coastal cities such as Santander and Gijón are well-positioned to grow as hubs for eco-tourism and marine-based industries.

4.2.3. País Vasco (Basque Country)

The Basque Country already combines a strong industrial base with a commitment to sustainability [56]. It will benefit from a continuing mild climate and access to renewable energy sources, such as wind and hydro-power (Nature-Based Solutions in the Basque Country. 20 success ...www.ihobe.eus/publications/nature-based). This region could accommodate 600,000 new residents, leveraging its innovative culture to attract businesses in green technology and manufacturing. The Basque Country also has the existing infrastructure needed to support high-value crops and urban farming initiatives [57].

4.2.4. Navarra

Navarra's transitional climate situated between the Atlantic and Mediterranean zones offers versatility for agriculture and renewable energy. With its increasing focus on innovation and sustainability, Navarra can support 400,000 new residents and attract companies specializing in solar and wind energy. Its fertile lands will remain well-suited for crops such as wheat, vegetables, and vineyards [58].

4.2.5. Castilla y León (Northern Regions)

The northern provinces of Castilla y León, particularly the lands near the Cantabrian Mountains, present opportunities for sustainable farming and rural revitalization. The region could host up to 200,000 new residents and 5000 farms focusing on regenerative agriculture and eco-friendly livestock management [59] [60].

The worsening climate conditions in southern Spain and parts of the central Spanish plateau already are pushing existing populations toward the north. In Andalucía, for instance, the combination of rising temperatures and diminishing water resources will likely force entire communities to relocate within the next decade. Desertification is already impacting over 20% of southern Spain, making large swathes of land unsuitable for farming or habitation [61].

4.2.6. Managing Climate Change Migration to Northern Spain

The anticipated influx of people, farms and businesses to the north requires a multi-faceted approach to ensure sustainable growth. The key elements now being addressed are described below.

Climate Change Haven Communities: Already underway are eco-friendly housing and business developments which are enabling villages in Galicia and Castilla y León to accommodate new residents. Also underway is the development of mixed-use neighborhoods which will minimize work and school commutes and reduce environmental impact [59] [62].

The Spanish government is currently subsidizing farmers relocating from the south and is also promoting the development of high-value, climate-resilient crops in the north. This action includes the adoption of eco-farming techniques to optimize land use and water conservation [63].

Spain also is offering tax incentives for businesses to move to the north and increasing the country's investments in sectors such as renewable energy, eco-

tourism, and sustainable manufacturing. The country is encouraging “digital nomads” and remote workers to re-settle in northern cities [64].

4.2.7. Establishing a Climate Change Haven Center in Spain

Although Spain has already made substantial progress in responding to the climate change challenges the country faces, we propose that a designated Climate Change Center be formed which will oversee the logistical, financial, and sociological issues now confronting the country. The Center will integrate Spain’s renewable energy generation activities, disaster management, health care, education, transportation, housing, and infrastructure needed to support the migration to Climate Change Haven Communities.

The CCHC will rely primarily on hydropower to enable the migration, utilizing the abundant rivers and rainfall in northern Spain to generate sustainable electricity. Solar panels, wind turbines, and battery energy storage will complement this system, ensuring power during dry periods. Advanced flood control systems, including levees and retention basins, will protect against the heightened risk of flooding in the northern region, while storing water in reservoirs for future use. The construction of the CCHC will require coordinated investments from the local, regional and national government, private companies, and international funds (e.g., the EU), leveraging resources such as the European Green Deal and public-private partnerships [30].

Eco-housing and healthcare facilities within the CCHC’s purview will provide immediate shelter during extreme weather and homes for displaced populations prior to their re-location to Climate Change Haven Communities in the north of the country. Climate Change Haven Communities will use sustainable designs and materials to promote energy efficiency and durability. Roads and transit systems connecting the centers will be constructed to withstand climate extremes and support electric vehicles, enhancing sustainability while ensuring reliable access to resources and emergency response.

Strategic placement in northern regions such as Galicia, Asturias, and the Basque Country will maximize the benefits of Spain’s natural resources and accommodate our internal climate migrants. By combining innovative technology with comprehensive planning, CCHCs will serve as a cornerstone of Spain’s strategy to adapt to climate change, providing protection, resources, and the opportunity for a sustainable future.

4.2.8. Addressing Migrant Issues in Spain

Current political rhetoric about external migrants in Spain often amplifies fears of crime, cultural erosion, and economic competition for resources [65]. Concurrently, language barriers, religious differences and economic disparities create additional hurdles for external migrants seeking to integrate into Spanish society. The lack of integration fuels cycles of marginalization, further entrenching societal divisions.

Additionally, a high percentage of migrants entering Spain are doing so

illegally, and are perceived as taking job opportunities from the Spanish population [66]. Thus a major challenge lies in addressing the short-term pressures of migration, while maximizing its long-term benefits [67].

To address these challenges, Spain will need to adopt a balanced approach to immigration. Policies that combine effective border control with clear pathways for legal migration and integration are essential. Investing in programs that up-skill migrants and match them with labor market needs can alleviate perceptions of economic competition and maximize their contributions. Community engagement initiatives can help bridge cultural divides, reducing stereotypes and fostering social cohesion. Above all, Spain must address its broader political instability, as a coherent and unified government is critical for implementing effective, long-term migration policies.

Over the next five years (2025-2030), Spain's immigration policies are expected to undergo significant changes, shaped by the intersecting pressures of climate-driven migration, labor market demands, and broader European Union dynamics. As a primary entry point for migrants from Sub-Saharan Africa and other regions, Spain's geographic location, demographic trends, and political environment will require reforms to balance humanitarian needs, economic priorities, and border security concerns.

Demographic challenges, including the country's aging population and labor shortages in sectors such as agriculture, healthcare, and technology, will likely motivate Spain to expand legal migration pathways. These initiatives may involve streamlined visa programs, bilateral agreements for worker recruitment, and targeted efforts to attract skilled migrants. Integrating migrants into the labor market and society will be a priority, with investments in language training, education, and housing to facilitate successful assimilation and reduce social tensions [68].

At the European Union level, Spain is expected to take a leading role in advocating for equitable burden-sharing mechanisms among the member states. This may involve reforms to the Dublin Regulation, which currently places disproportionate responsibility on frontline countries such as Spain. Spain will push for solidarity measures, such as financial assistance and the redistribution of asylum seekers, to ensure a more balanced approach to migration management across the EU [69]. This will be a crucial test of the internal coherence of the European Union as an over-arching governmental body. Will the EU embrace equitable burden-sharing across its members, or will it collapse under the pressure of conflicting member demands?

5. Climate Change Adaptation in the Taiwan Region

The Taiwan region has a population of 23,000,000 persons, the great majority of whom are of Han Chinese descent [70]. This ethnic homogeneity and a shared common language provide the Taiwan region with a strong foundation for addressing climate change on a national level [71]. Also working in the Taiwan region's favor is the fact that the country excels in rapidly evolving technology,

especially semiconductors [72]. This manufacturing core is further bolstered by a strong service economy (60% of GDP) driven by tourism, finance and retailing [72].

A current problem, however, is the aging of the population in Taiwan region, with a median age of 42.7 years. This is particularly true in the rural agricultural region of the country [73]. Because of this, the Taiwan region would benefit from the in-migration of young workers, especially those with technical training and young agricultural workers [73].

An additional issue impacting the Taiwan regional response to climate change is the sizable migrant labor workforce currently in the country which is largely composed of emigres from Southeast Asia. As shown in **Figure 6** below, these immigrant workers do not feel they are being treated equitably in Korean society. [74]. These people currently experience some degree of hostility to their presence, although it is also recognized that they are performing much needed tasks [75].



Figure 6. Migrant laborers demonstrate for better working conditions in Taiwan Region.

We suggest that a communications campaign be developed to help educate the people from the Taiwan region regarding the value of these non-native workers. This campaign would be used to communicate that these workers help boost the economic status of the country and will also be helpful in supplying workers to construct the Climate Change Haven Communities which the Taiwan region will need. As will be discussed below, certain portions of the population from the Taiwan region are now threatened by environmental degradation along the coastline and will need to be re-located very soon [76] [77].

The Taiwan region has a variety of geographic features relevant to its climate change response. In particular, the Central Mountain Range and Eastern Coastal Plain are locations where Climate Change Haven Communities can be safely built.

The Central Mountain Range runs the entire length of the island and is the best option for constructing Climate Change Haven Communities. Here the residents will have adequate water supplies, as well as protection from the anticipated harsh storms that will damage the coastal areas as climate change intensifies [78].

However, just as is predicted to occur in the Appalachian Mountains, strong storms will cause flash flooding in the Central Mountain Range. Therefore, flood control dams must be constructed before Climate Change Haven Communities are built. Fortunately, several of these dams are already being constructed in key areas [79] [80]. Notably, the Appalachian and Northern Tier regions of the United States, which can serve as Climate Change Havens for the US, have **not** begun the construction of needed flood control dams, because Federal Government funding is not available and the individual states have not accepted the financial responsibility for this task.

We recommend that as flood control dams are constructed in the Central Mountain Range, the new Climate Change Haven Communities adhere to the model already developed for Climate Change Haven Communities in Appalachia. There is ample water supply for the use of hydroelectric power generators, which will permit the residents to create a self-sustaining community that meets their needs [81]. We estimate that 1 to 2 million residents can live here comfortably.

The Eastern Coastal Plains have rich soils ideal for a variety of agricultural crops [82]. Solar panels and wind turbines will be installed here to capture the abundant sunlight and the prevailing winds along the coast of the Taiwan region [83]. This area can accommodate 500,000 new residents and serve both as an agricultural center and a location for Climate Change Haven Communities. The Eastern Coastal Plains can also accommodate a variety of business, manufacturing and retail activities, which will enable the Taiwan region to diversify its economy and food supply, while reducing its carbon emissions. Adequate flood control measures will need to be constructed here, as well, prior to the construction of the Climate Change Haven Communities [84].

The Taiwan region has already been very active in preparing for climate change [85]. Existing cities such as Taipei and Kaohsiung have already begun retro-fitting buildings and roadways for climate resistance [85]. These alterations include flood control systems, adaptable housing designs that can resist temperature and humidity changes, as well as upgrading core infrastructure. For example, drainage systems are being reinforced and roads are being elevated. The goal is to use these changes to attract skilled migrants from adjacent countries to upgrade and enlarge Taiwan region's technology and financial sectors. These will be critical for maintaining Taiwan region's economic and technological leadership position into the future.

Taiwan region intends to become a leader in sustainable economic and production activities by 2030 [86]. Concurrently, large-scale, sustainable agricultural projects are already being undertaken to ensure a stable healthy food supply for residents, especially since some existing lowland farming areas may become flooded

due to climate change [87]. This will reinforce the security of the national food supply over the long term.

The government of Taiwan region also is developing a series of **relocation initiatives** that will transfer current residents in threatened locations to the two designated Climate Change Haven Zones—the Central Mountain Range and the interior Western Coastal Plane. Tax breaks, subsidized housing and schools, purpose-built administrative buildings and office parks are already funded and under construction. Each of these new communities will have access to the major cities using eco-efficient transportation systems, especially rail systems [88].

The Taiwan region recognizes that all countries are in this together and by working in tandem with others, global climate change response is more likely to be successful. The country will support this by emphasizing social cohesion among its current residents and by actively integrating those who choose to immigrate here into the economic and cultural system. To enable this, the Taiwan region is currently revising its visa programs to attract climate migrants with the skills needed for maintaining its economic and technological success [89]. The Taiwan region is also working with the United Nations and regional economic development efforts in the South Pacific/Pacific Rim to coordinate efforts with those of other nearby areas.

6. Discussion

6.1. Implications for the Economic Futures of the Examined Countries

This research has investigated climate change response activities across a political spectrum from free-market capitalism to state-directed economies. At present, the country farthest to the right on this spectrum, the United States, does not have a coherent national plan for dealing with climate change. The prior Democratic administration created a useful list of projects that would have helped response efforts and acted to mitigate some currently threatened areas, such as the Gulf Coastal regions. However, these were never adequately funded and as a result were never completed, and in some cases never even begun [90].

The incoming Republican Administration has already signaled its reluctance to acknowledge the issue of climate change impact on the US economy and indeed has signaled its desire to decrease funding for existing climate change response efforts, such as the Environmental Protection Agency and the Federal Emergency Management Administration [91] [92]. Instead, the new administration is focusing its efforts on deporting persons who have entered the United States illegally [93].

Given this political stance, we believe it is unlikely that the United States will act effectively to counteract the negative effects of climate change along the Gulf Coast and in the most susceptible states within its borders by the year 2030. Importantly, these states include the three most heavily populated and economically important—California with a population of 39,128,162 and an economy of \$3.9

trillion, Texas with a population of 30,900,000 and an economy of \$2.6 trillion; and Florida with a population of 23,000,000 and an economy of \$1.58 trillion [94].

What will happen as climate conditions deteriorate in these three US states? The most likely scenario, we believe, is that the business enterprises located within each state, many of which are extremely wealthy, will take it upon themselves to identify Climate Change Haven areas in the Continental United States and, after negotiating with residents and politicians in the areas they have selected, move their entire operations to these new locations.

This unfortunately will leave behind the persons employed at the local schools, medical centers, administrative and governmental services, as well as the small businesses. In essence, all inhabitants not affiliated with the departing corporations will likely be left behind to fend for themselves as the local climate deteriorates.

The transfer of entire corporations to Climate Change Haven Communities will also put a tremendous strain on the existing set of services in the Climate Change Haven areas to which the company relocates. The 'receiving' communities will not have the necessary financial resources, administrative services and trained personnel necessary to replace the support systems the incoming corporations have left behind. There will be a shortage of medical, educational, governmental, maintenance, police, and emergency personnel present in the new host community to service the large inflow of newcomers. A much more efficient plan would be to transfer entire endangered communities to the Climate Change Haven location, but it is very unlikely that for-profit corporations will see this as their responsibility and even less likely that the current US government would be politically willing to support such a plan.

Conversely, the countries composing the European Union, represented here by France and Spain, have open borders, a common currency, and amiable relationships. As a result, they should be able to work together to assist those members most threatened by climate change by providing re-location sites in their countries. It is probable that the most climate-threatened EU countries, for example, Spain, Italy, will not be able to relocate their at-risk residents entirely within their own borders. Some citizens will have to re-locate to other EU countries farther north, e.g., Sweden. Maintaining political solidarity among the members of the European Union will be essential for supporting their mutual economies, as this inter-country migration takes place.

The Taiwan region (and by extension China), whose internal populations are largely homogeneous and supportive of central government actions, have already recognized the enormous threat, both economically and socially, which climate change represents to their residents. Both have already begun efforts to re-locate persons, economic assets and agricultural activities to safer areas. It is therefore likely that their economies will become the most economically viable internationally by the mid to late 2030's.

6.2. Implications for Future Patterns of Climate Migration, Environmental Justice and Sustainable Development

This research has important implications for current and near-future patterns of climate migration, environmental justice and sustainable development. For migrants originating in Mexico, Central and South America, as well as the Caribbean, it will likely not be possible to enter the United States. They will then face two options, if they want to escape increasing climate degradation where they now live. The first is to move to the Andes Mountain Region of South America, which remain will habitable and even capable of a producing a wider variety of crops than at present [95]-[97].

An alternative option would be to establish migration channels by boat to Canada, bypassing the United States, and arriving in Canada on either the Western or Eastern shores, e.g., Vancouver and Montreal. The western region of Canada is primarily British in language, government and culture, while the eastern region, Quebec, has a historically French culture and language [98]-[102].

The second option will require large amounts of public and/or private funding. If this route for migration is chosen, it will likely result in the movement of the most affluent and well-educated persons from the climate-threatened regions of Mexico, Central and South America and the Caribbean. From an environmental justice perspective this is deeply disturbing, but, as we will discuss shortly, the same effect is predictable in the European Union countries [103]-[106].

In the present research we also examined the immigration policies of Spain and France, two economically important members of the European Union, in depth. Because both countries share a cross-sea linkage with North Africa, they are on the 'front-lines' of immigration from the African Continent as inhabitants seek to escape the brutal consequences of climate change [107]. Unfortunately, there are no locations on the African continent that will remain habitable in the coming decades. The present population of Africa is 1,533,578,708 and consists of many racial, ethnic and religious groups [108]. To transfer all of these people(s) to Climate Change Havens in Europe will not only be financially impossible, but would certainly overwhelm the social structure of the European Union countries.

Concurrently, the countries of the Middle East and eastern Mediterranean (some of which are EU members) are also facing severe droughts, water shortages and heat waves due to climate change, and their populations will also have to move northward soon in order to survive [109]. The key findings from the study cited above are: "The Eastern Mediterranean and Middle East is warming almost two times faster than the global average and other inhabited parts of the world. Climate projections indicate future warming, strongest in summers. Precipitation will likely decrease, particularly in the Mediterranean. Virtually all socio-economic sectors will be critically affected by the projected changes."

This region of the world contains 597 million persons of several religious faiths including Sunni and Shia Islam, Catholicism, Orthodox Christianity and Judaism (worldometer.com 2025, EMME population). It will be very difficult to

organize the large-scale migration/evacuation efforts necessary to transport these persons from their current locations to Climate Change Havens to the Northeastern parts of Europe which lie above their current locations. Additionally, several of the potential receiving countries are not members of the European Union and have made no commitment to accepting migrants. It is unlikely that the EU member countries would be amenable to accepting these persons, when their own incoming migrant figures are so large.

Notably, as has been described in detail earlier, the Taiwan region (and by extension China), has already issued detailed visa and immigration directives that identify those persons from Southeast Asia they would be willing to accept as migrants. Educational and occupational training programs are already established and being used to integrate migrants into the socio-cultural system of the Taiwan region and guide them to needed occupations. However, it is estimated that the number of persons who would need to leave Southeast Asia due to climate change is approximately 700 million persons (worldometer.com 2025, southeast asia). We do not have information at this time if this number will exceed the labor requirements of Taiwan region or China.

7. Conclusions

In closing, the world is facing a dramatic challenge that will severely test the efficacy and resilience of the existing forms of national government, regardless of where they are located on the continuum from free-market capitalism to state-directed economies. Many, many lives are now hanging in the balance.

FOOTNOTE ONE: 10th Amendment

The Tenth Amendment of the United States Constitution has been used as a prominent tool of invoking nullification, a common tactic of those who believe in the primacy of States' rights. The Tenth Amendment reads as follows.

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

Notably, the Tenth Amendment has been successfully utilized to nullify restrictive federal laws pertaining to gun rights, immigration, cannabis, and more. Additionally, organizations such as the Tenth Amendment Center seek to utilize the Tenth Amendment to achieve, "Liberty through decentralization". The Tenth Amendment center chiefly focuses on encouraging state representatives to submit bills that nullify federal laws by providing model legislation on their website that provides a rubric for state legislators to follow.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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