

Lessons from Fukushima Revisited: Population Risk and Community Vulnerability in Suspended Nuclear Power Plant Areas

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Abstract

This paper investigates the regional population where nuclear power plant construction was planned but subsequently canceled in Japan. Using national census data from 2000, 2010, and 2020, the analysis calculates populations within concentric zones (5 km, 10 km, 20 km, 30 km, 50 km, 80 km, and 100 km radii) centered on the planned sites through GIS-based area-weighted methods. In addition to these concentric distances, the study emphasizes socially and institutionally meaningful ranges, such as the Precautionary Action Zone (PAZ), the Urgent Protective Action Planning Zone (UPZ), and evacuation/compensation areas defined by Operational Intervention Levels (OILs) after the Fukushima Daiichi accident. The results reveal that many canceled sites were located in small municipalities with declining populations, often below 10,000 residents, while a limited number of sites were situated in more populous areas exceeding 100,000 residents. This comparison highlights that, in the event of a severe nuclear accident, the scale of compensation burdens would be unmanageable for sites surrounded by large populations, far exceeding the

financial capacity of existing electric utilities. By integrating both geometric and policy-relevant spatial frameworks, this study contributes to nuclear disaster preparedness by clarifying demographic risks not only around existing nuclear power plants but also in regions where construction was halted.

Keyword: Evacuation Planning, Suspended Nuclear Power Plant Projects, Community Vulnerability, Concentric Zones, Fukushima

1 Introduction

1-1 Relationship between the reduction of evacuation zones and decontamination Efforts

In regions where human danger is predicted due to disasters such as earthquakes, tsunamis, wildfires, droughts, and typhoons, or in areas where actual damage has occurred, evacuating people is generally standard practice. This also applies to disasters caused by nuclear accidents. For example, following the Chernobyl Nuclear Power Plant accident and the Three Mile Island Nuclear Power Plant accident, evacuation advisories were issued for residents living near the nuclear power plants.

However, the basic policy of Japan's recovery efforts following the hydrogen explosion at the Fukushima Daiichi Nuclear Power Plant in March 2011 and the subsequent spatial dispersion of radioactive substances, soil contamination, and the emergence of low-to-high radiation areas, was not evacuation but decontamination. Evacuation zones were initially established within a 20-kilometer radius of the plant following the 2011 accident, but under the leadership of the Ministry of the Environment, the geographical scope of these zones has been gradually reduced through decontamination efforts aimed at lowering radiation levels. Within a 20-kilometer radius of the plant, annual radiation levels were 20 mSv or higher, has been gradually reduced through decontamination efforts (Ministry of the Environment, 2023).

In the Fukushima nuclear accident, decontamination efforts were carried out in contaminated areas regardless of whether they were designated as evacuation zones or not, and policies were implemented to encourage the return of residents who had evacuated to areas outside the zones where spatial radiation levels had been reduced. Why is decontamination rather than evacuation being promoted as a means of facilitating the return of residents, unlike in other accidents or disasters? One perspective is that budget constraints faced by government and public utilities, reflected in reconstruction budgets, make decontamination a more cost-effective option for these entities compared to evacuation. The relationship between decontamination and compensation for individuals and corporations is a trade-off in the short term and a proportional relationship in the medium to long term (Fujimoto, 2015).

1-2 Areas where nuclear power plant construction was halted and evacuation zones

The geographical scope of the evacuation zones established following the 2011 Fukushima nuclear accident (primarily within a 20 km radius) was narrow compared to those established after the Chernobyl and Three Mile Island accidents. However, for the government,

local authorities, and power companies, it was an unexpectedly wide geographical area. Taking this unforeseen nature into account, the geographical scope of regional disaster prevention plans for nuclear disasters was revised, expanding beyond the previous 10 km radius to a 30 km radius (Nuclear Regulation Authority, 2024).

On September 11, 2024, the Nuclear Regulation Authority revised the “Guidelines for Nuclear Disaster Countermeasures” in their entirety. The revised guidelines define the “Nuclear Disaster Countermeasures Priority Area”¹⁾, which includes the PAZ (Precautionary Protection Zone) within a radius of approximately 5 km from the PAZ, and the UPZ (Emergency Protection Zone) within a radius of approximately 5~30 km from the nuclear power plant. The basis for setting the PAZ at 5 km is stated in the same guidelines as follows: “Regarding the specific scope of the PAZ for nuclear power plant facilities, in accordance with international standards of the IAEA (International Atomic Energy Agency), the maximum radius of the PAZ is set between 3~5 km from the nuclear facility (with 5 km recommended). Taking this into account, ‘approximately 5 km radius from the nuclear facility’ is used as a guideline (Nuclear Disaster Guidelines, p. 9). This is based on IAEA standards. The basis for the UPZ being a 30-km zone is also based on IAEA standards, which state that “the UPZ is an area where emergency protective measures are prepared to reduce the risk of probabilistic effects, based on the EAL (Emergency Action Levels) and OIL (Operational Intervention Levels)”. Regarding the specific scope of the UPZ for nuclear power plant facilities, based on the IAEA’s international standards, which state that the maximum radius of the UPZ should be set between 5 km and 30 km from the nuclear facility, the guideline states. As a general guideline, the UPZ should be set at approximately a radius of 30 km from the nuclear facility” (Nuclear Disaster Guidelines, p. 9).

In the areas covered by the PAZ and UPZ, the “emergency response measures” to be taken in the event of a nuclear accident include the following “protective measures and other necessary measures”: “(1) Evacuation and temporary relocation,” “(2) Indoor shelter,” “(3) Distribution and administration of stable iodine,” “(4) Nuclear disaster medical care,” “(5) Evacuation exit inspection and simple decontamination,” “(6) Thyroid radiation dose monitoring,” “(7) Restrictions on food and drink consumption,” and “(8) Emergency response” Protective measures for personnel involved in countermeasures” are listed, and finally, “(9) Lifting of various protective measures” outlines the conditions for lifting such measures.

When implementing protective measures, it is appropriate to refer to “Table 1-1: Measures to be taken by nuclear power plant operators, the national government, and local public entities (Part 1/2) (Nuclear Disaster Guidelines, p. 36)” and “Figure 1: Example of the flow of protective measures (Nuclear Disaster Guidelines, p. 42),” which outlines the response procedures in the event of a full-scale emergency. When the criteria for implementing protective measures, known as the OIL are applied, and the criteria for OIL 1—which involves protective measures such as evacuation, sheltering indoors, and temporary relocation—are met,

1) Here, I focus on cases involving “nuclear reactors for power generation.” However, there are also cases involving “research and experimental nuclear reactor facilities,” “processing facilities,” “reprocessing facilities,” and “other nuclear facilities.” The “nuclear disaster countermeasure priority area” is defined as a separate area from that designated for “power generation reactors”.

within the UPZ (Outside the PAZ), evacuation measures are anticipated in areas where contamination has been identified through emergency monitoring. If the OIL 2 criteria are applied, temporary evacuation measures are anticipated. In contrast, outside the UPZ, even if contamination is identified through emergency monitoring, protective measures up to OIL 2 are applied, and only measures up to “temporary relocation” are anticipated, rather than “evacuation.”

The application of these measures is noted in a footnote: “This illustration demonstrates the general actions of each entity. In each region, entities shall take actions regarding protective measures in accordance with regional characteristics and other factors (Nuclear Disaster Guidelines, p. 36).” However, the flowchart for protective measures assuming evacuation outside the 30 km zone is not included.

Even the latest revision of the “Nuclear Disaster Countermeasures Guidelines” as of September 2024 does not consider evacuation outside the 30 km radius as part of the “example of the implementation flow of protective measures,” and therefore, municipalities where nuclear power plants are located, and the “Regional Disaster Prevention Plans” created by municipalities adjacent to those municipalities similarly do not include plans assuming that the evacuation zone (evacuation order zone) for areas expected to be contaminated in a nuclear disaster extends beyond the 30 km radius. As a result, the “Disaster Prevention Plans” only include the population within the 30 km radius as the target for evacuation, and surveys on the population distribution in areas beyond the 30 km radius have not been conducted.

2 Previous studies and research methods on calculating the population around nuclear power plants

2-1 Previous studies and research methods

In Japan, calculations of the population within the vicinity of nuclear power plant sites have been conducted by Tani (2011), who used 18 locations in Japan where nuclear power plants are located as central points and calculated the population within a 50 km radius of these points based on the 2005 national census, dividing the area into 10 km distance zones²⁾. Fujimoto (2025a) analyzed the “regional population” surrounding “nuclear power plant siting regions” using the same data and methods as Tan, targeting regions where nuclear power plants were already located, and conducted comparative analyses by expanding the target year and region. In this paper, I apply the same methodology to analyze the surrounding population of regions where nuclear power plants were planned but construction was canceled.

For locations where nuclear power plant construction was planned but canceled, the study will target areas listed as “nuclear power plant rejection sites” in “Nuclear Power Plant Rejection Map” by Hirabayashi (2013) and in “Nuclear Power Plant and Reactor Construction Sites (as of December 31, 2022)” published by the Nuclear Information Center (2023). “Nuclear Power Plant Refusal Map” in the “Nuclear Citizens’ Yearbook 2023” published by the

2) In the United States, Kohler, J. E., Kenneke, A. P., & Grimes, B. K. (1975) analyzed the regional population of nuclear power plant siting regions within the United States.

Nuclear Information and Resource Center (2023). Locations where nuclear power plants are already in operation are excluded from the analysis.

The target years are 2000, 2010, and 2020, for which population data from the national census is available. Regarding the calculation areas, based on the example of the Fukushima nuclear accident, the following zones are defined: (1) PAZ (5 km radius), (2) Conventional disaster prevention zones (within a 10 km radius), (3) Evacuation order areas during the 2011 Fukushima nuclear power plant accident (within a 20 km radius), (4) UPZ • Indoor evacuation areas in 2011 (within a 30 km radius), (5) Tani-created map (within a 50 km radius), (6) U.S. Embassy (80 km radius), and (7) CEZ • Chernobyl standard (100 km radius), the population of the seven zones will be calculated. To calculate the population within zones (1) through (7), use the 2000, 2010, and 2020 census 500m mesh data and apply the area-weighted method to calculate the circular population. The GIS software used for population calculation is ArcGIS Pro.

To calculate the population within concentric circles centered on the planned nuclear power plant site, it is necessary to identify the center point as the nuclear power plant site. The planned nuclear power plant site is identified by specifying the address of the planned nuclear power plant area down to the town/village name and then determining the representative location within the town/village that is also along the coast and obtaining the latitude and longitude coordinates of that location. The Kaminoseki Nuclear Power Plant in Yamaguchi Prefecture was identified as a nuclear power plant site area in Fujimoto (2025a), with its regional population clarified. However, construction had not commenced as of September 2025, it is included in Figures 2 and 3 of this study. A list of regions where construction was planned but canceled is shown in the map of Figure 1 (Figure 1).

2-2 Distance from the nuclear power plant and evacuation zones

This study calculates the population within circular areas centered on nuclear power plants based on their distance from the plants. However, actual nuclear accidents, particularly the Fukushima nuclear accident, resulted in evacuation zones and areas eligible for compensation, whose geographical boundaries were also determined by their distance from the nuclear power plants. Residents and businesses within these areas were subject to mandatory evacuation, and compensation was paid. Local governments in areas where nuclear power plants are located have established “Regional Disaster Prevention Plans” based on the Disaster Prevention Basic Plan (established in June 1963, revised in June 2024)³⁾ and the Nuclear Disaster Countermeasures Guidelines (established on October 31, 2012, completely revised on September 11, 2024)⁴⁾. These plans also determine the geographical scope based on the

3) The Disaster Prevention Basic Plan is defined as “the basic plan for disaster prevention measures of the government, established by the Central Disaster Prevention Council in accordance with Article 34, Paragraph 1 of the Disaster Countermeasures Basic Act (Law No. 223 of 1961).” Cabinet Office Policy Coordination Bureau (Disaster Management Division), HP address is <https://www.bousai.go.jp/taisaku/keikaku/kihon.html#syusei> (Accessed on March 10, 2025)

4) The same guidelines are defined by the Nuclear Regulation Authority as “measures established by nuclear power plant operators, heads of designated administrative agencies, heads of designated local

Figure 1: List of areas where nuclear power plant construction has been suspended



Source: Nuclear Information Center (2023), based on the Nuclear Citizens' Yearbook 2023.

Note 1: The names of nuclear power plants scheduled for construction are provisional.

Note 2: The latitude and longitude information for each planned site is based on the representative location of the address (town name) of the area where the nuclear power plant was planned to be located, and coastal locations have been selected.

distance from the nuclear power plant. PAZ (5 km radius) and UPZ (5–30 km radius) zones have been established.

In Fukushima Prefecture and throughout Japan, spatial radiation levels and soil contamination levels are measured at very limited locations using monitoring posts. However, when the areas where these measurements are geographically distributed are shown on a map as “actual regions,” the radiation levels and contamination levels do not necessarily vary proportionally with distance. However, factors such as wind direction, weather conditions, wind

administrative agencies, local public entities, designated public agencies, designated local public entities, and other relevant parties to ensure the smooth implementation of nuclear disaster countermeasures in accordance with Article 6-2, Paragraph 1 of the Special Measures Law for Nuclear Disaster Countermeasures (Law No. 156 of 1999)” (Nuclear Regulation Authority, Nuclear Disaster Countermeasures Guidelines, 2024).

speed, geology, and topography are corrective factors. The primary factor influencing the relationship between regions and soil contamination/spatial radiation levels is distance. Furthermore, in the “Regional Disaster Prevention Plans” created by each local government, the areas targeted by the plans are delineated based on the distance from the nuclear power plant, using concentric circular geographic ranges. Therefore, in this paper we adopt the same methodology as Fujimoto (2025a) to analyze the spatial distribution of radiation levels in the vicinity of nuclear power plants.

3 Population in the Vicinity of Areas Where Nuclear Power Plant Construction Has Been Suspended

3-1 Distribution of planned nuclear power plant sites

Figure 2 shows a list of the 52 regions where nuclear power plant sites were planned and an overview of Kaminoseki. The northernmost point is Wakkanai (Wakkanai City) in Hokkaido, the southernmost point is Uchinoura (formerly Uchinoura Town, now part of Kimotuke Town) in Kagoshima Prefecture, the westernmost point is Chikazaki (Genkai Town) in Saga Prefecture, and the easternmost point is Taro (formerly Taro Town, now part of Miyako City) in Iwate Prefecture (Figure 2).

Regions where no nuclear power plant sites were planned are mainly areas along the Tohoku Shinkansen line connecting Tokyo, Nagoya, and Osaka, known as the Tokaido Megalopolis, as well as inland regions not facing the sea. All other prefectures in regional blocks have regions where nuclear power plant sites were planned. Many nuclear power plants have been planned in Hokkaido, Tohoku, Hokuriku, Chugoku, Shikoku, and Kyushu. Additionally, even within the three major metropolitan areas, there are planned sites in southern Mie Prefecture, which is distant from Nagoya, Yokkaichi, and Tsu, and in the Japan Sea side of Kyoto Prefecture and Hyogo Prefecture, which are distant from Kyoto, Kobe, and Himeji.

By prefecture, the region with the highest number of planned sites is Hokkaido with six regions, followed by Aomori Prefecture with five regions, Wakayama and Yamaguchi prefectures with four regions each, and Iwate and Mie prefectures with three regions each. Regarding the year of planning, the definition is vague⁵⁾, but according to the same table, the oldest planned site is Ashihama (Mie Prefecture) in 1963. Following the Chernobyl nuclear power plant accident in 1986, no further plans for nuclear power plant sites have been made, with the last plan being for Kushima (Kushima City) in Miyazaki Prefecture in 1992.

3-2 Population of municipalities in planned nuclear power plant siting areas and population changes

Figure 3 shows the population changes in municipalities (cities, towns, and villages) where nuclear power plants were planned to be located, from 1963 to 1992. Many are located in small municipalities. Grants related to power plant siting and donations from power companies account for a significant portion of local government revenues, resulting in greater fiscal flexibility compared to municipalities of similar size. As of 1975, only 11 out of 52 regions had

5) The year listed here may not necessarily correspond to the year announced by the power company.

planned to locate nuclear power plants within the city as an administrative district (Figure 3).

As of 1980, the municipality with the largest population among those hosting nuclear power plants was Tsuruoka (Yamagata Prefecture) with 122,000 people, the only municipality exceeding 100,000. All others had populations under 100,000, with the smallest being Hamamasu (Hokkaido) with 3,977 people. Additionally, 21 regions had populations under 10,000. As of 2020, the population figures listed here include only the areas of the former municipalities before municipal mergers. The smallest is Hamamasu (Hokkaido) with 1,206 people, and the decrease rate is -69.6%, less than one-third of the 1980s figure.

As of 2020, mergers have been carried out in 41 regions, and when considering the population of 2020 including the merged areas, the population of Niigata City, which includes the Maki region, is the largest at 789,000, with an increase rate of 132.5% for the Maki region alone. Sadowara (Miyazaki Prefecture) became part of Miyazaki City with a population of 401,000, Houhoku (Yamaguchi Prefecture) became part of Shimonoseki City with a population of 255,000, and Aoya (Tottori Prefecture) became part of Tottori City with a population of 188,000. However, all other regions, even after mergers, have populations of less than 100,000.

When looking at population changes in the former municipalities alone, the only areas with increases were the previously mentioned Maki, Hidaka (Wakayama Prefecture) at 10.0%, Shima (Fukuoka Prefecture) and Koganemaru (Fukuoka Prefecture) at 15.5%, and Sadowara (Miyazaki Prefecture) at 21.7%, totaling five regions.

3-3 Population within a radius centered on the planned nuclear power plant site

Using the site of the nuclear power plant as the central point, set a radius for the population and calculate the population living within the circular area. Seven zones are calculated: (1) PAZ (5 km radius), (2) Conventional disaster prevention zone (within 10 km radius), (3) Evacuation zone during the 2011 Fukushima nuclear accident (within 20 km radius), (4) UPZ and 2011 indoor evacuation (30 km radius), (5) Tani's map (50 km radius), (6) U.S. Embassy statement (80 km radius), and (7) CEZ • Chernobyl standard (100 km radius) (Figures 4). This study will primarily examine data from 2020 and 2010, the year immediately preceding the nuclear accident, but for reference, data from 2000 is also included (Figure 6). Additionally, each figure includes the actual population around the Fukushima Daiichi Nuclear Power Plant, where the accident occurred, for reference.

In Figure 4, the 2020 values show that the PAZ (5 km radius) is less than 38,000 people in all regions. The highest figure is 37,000 in Koganemaru (Fukuoka), followed by 32,000 in Sadowara (Miyazaki), 29,000 in Takatsu (Shimane), 20,000 in Asanai (Akita), and 11,000 in Tsuruoka (Yamagata), with five regions exceeding 10,000. The lowest figures are 27 in Torimaki (Hokkaido), 40 in Uchinoura (Kagoshima), 333 in Taisei (Hokkaido), 453 in Kushima (Miyazaki), 469 in Wakkanai (Hokkaido), 813 in Hamamasu (Hokkaido), 892 in Anan (Tokushima), and Matsumae (Hokkaido) with 984 people, with eight regions having fewer than 1,000 people. Fukushima Daiichi (Fukuoka) had 0 people in 2020, but for reference, the figure for 2010, when residents were still living there before the Fukushima nuclear dis-

aster, was 13,000, ranking sixth in the same table.

The traditional disaster prevention zones (within a 10 km radius) established before the Fukushima nuclear accident had the highest population in Koganemaru with 147,000 people, followed by Shima with 113,000 people, both exceeding 100,000. Next, areas with over 50,000 people include Tsuruoka (Yamagata) with 85,000, Sadowara (Miyazaki) with 78,000, Kakuizhima (Okayama) with 49,000, Maki (Niigata) with 51,000, and Asanai (Akita) with 45,000. The lowest population is 127 people in Torimaki (Hokkaido), the same as the 5 km radius, with 734 people in Uchinoura (Kagoshima) being the only other area with fewer than 1,000 people. Next are Wakkanai (Hokkaido) with 1,073 people, Hamamasu (Hokkaido) with 1,086 people, Taisei (Hokkaido) with 1,160 people, Nogyu (Aomori) with 3,680 people, Tanohata (Iwate) with 4,373 people, Amakusa (Kumamoto) with 4,540 people, and Shiura (Aomori) with 4,707 people, making a total of nine regions with populations under 5,000. Fukushima Daiichi (Fukushima) has 3,846 people, but for reference, in 2010, the figure was 46,000, placing it eighth in the same table for that year.

The 20-kilometer zone designated as an evacuation zone during the Fukushima nuclear disaster was an evacuation area that resulted in mandatory evacuations. From this example, it can be seen that this is the area where compensation from the power company actually occurred for mandatory evacuees. The highest number was 674,000 in Koganemaru (Fukuoka), followed by 611,000 in Shima (Fukuoka). Next, Sadowara (Miyazaki) has 416,000 people, exceeding 300,000. Following this, Maki (Niigata) has 299,000 people, Tsuruoka (Yamagata) has 226,000 people, Kamikita (Aomori) has 169,000 people, Kakuizhima (Okayama) has 152,000 people, Aoyama (Tottori) has 136,000 people, Chikazaki (Saga) with 103,000 people, and Hidaka (Wakayama) with 103,000 people, bringing the total to 10 regions with populations exceeding 100,000.

The smallest population is in Torimaki (Hokkaido) with 1,167 people, followed by Hamamasu (Hokkaido) with 1,714 people, Wakkanai (Hokkaido) with 2,696 people, Taisei (Hokkaido) with 5,343 people, and Matsumae (Hokkaido) with 8,986 people, all of which are under 10,000 people and are all located in Hokkaido. Fukushima Daiichi (Fukushima) has a population of 13,000, but for reference, in 2010, the figure was 76,000, which was less than 100,000. In 2010, it ranked 17th in the same table, following Asanai (Akita) with 80,000, which was 16th. In the PAZ zone, which is the traditional disaster prevention area, Fukushima Daiichi (Fukushima) ranked high in 2010, but when considering the actual evacuation zone and compensation area within a 20 km radius, the population within the zone is not significantly larger than that of the planned nuclear power plant site.

Assuming that a nuclear accident of the same scale as the Fukushima nuclear accident occurred at the 52 planned sites, the number of areas within the 20 km radius where compensation for evacuation would be payable is only 36 areas, as shown in Figure 5, ranking 17th with Kamae (Oita) and below, totaling 36 locations. The remaining areas, including the previously mentioned 10 regions with populations exceeding 100,000, as well as Asanai (Akita), Anan (Tokushima) with 94,000 people, and Hagi-Sanmi (Yamaguchi) with 81,000 people, would be unable to receive compensation payments under the existing budget scales of power companies.

Looking at the UPZ/2011 indoor evacuation zone (30 km radius) designated in the regional disaster prevention plans established after the Fukushima nuclear accident, the populations of Koganemaru (Fukuoka) and Shima (Fukuoka) exceed 2 million people at 2.102 million and 2.057 million, respectively. This is significantly larger than the 30 km radius population of the areas where nuclear power plants are actually located, such as Tokai (Ibaraki) with 889,000 people, Hamaoka (Shizuoka) with 721,000 people, and Shimane (Shimane) with 425,000 people (Fujimoto, 2025a). Five regions—Maki (Niigata) with 876,000 people, Sadowara (Miyazaki) with 518,000 people, and Kakuizhima (Okayama) with 510,000 people—exceeding 500,000 people, and 23 regions, including Hiwasa (Tokushima) with 100,000 people, exceed 100,000 people. Within a 30 km radius, only Hamamasu (Hokkaido) has fewer than 10,000 people, with 2,399 residents. Regions with fewer than 20,000 people include Hamamasu, plus Torimaki (Hokkaido) with 10,000 people, Kitahiyama (Hokkaido) with 12,000 people, Matsumae (Hokkaido) with 14,000 people, and Taisei (Hokkaido) with 14,000 people, all located in Hokkaido.

Even within a 30 km radius, areas where the annual spatial radiation dose exceeded 20 mSv during the Fukushima nuclear power plant accident were designated as mandatory evacuation zones, and some of these areas were included within the 20–30 km radius. For reference, the population of Fukushima Daiichi (Fukushima) in 2010 was 138,000, ranking 23rd in Japan, following Hikigawa (Wakayama) with 140,000, and was of medium size, similar to the 20 km radius area, and not among the top regions. Regions with populations below this include Kuromatsu (Shimane) with 129,000 people or fewer, totaling 30 regions. Some areas within the 20–30 km radius include mandatory evacuation zones, and the construction of nuclear power plants has been halted in these areas.

Compensation from the power company is payable to evacuees within a 20 km radius. However, even assuming an accident occurs, the area affected by radioactive contamination would not be identical to that of the Fukushima accident. Nevertheless, when examining the actual compensation payments made in the Fukushima accident, only 30 locations within the 30 km radius were eligible for compensation payments, while the remaining 22 locations were deemed ineligible for compensation due to the existing budget constraints of the power companies.

Looking at the map created by Tani research (50 km radius), the top two areas are Koganemaru (Fukuoka) with 3.93 million people and Shima (Fukuoka) with 3.80 million people. In addition to these, areas exceeding 1 million people include Kakuizhima (Okayama) with 2.44 million people, Maki (Niigata) with 1.56 million people, Chikagasaki (Saga) with 1.33 million people, Hohoku (Yamaguchi) with 1.16 million people, and Hidaka (Wakayama) with 1.09 million people, making a total of seven regions with populations exceeding 1 million. The smallest population is in Torimaki (Hokkaido) with 25,000 people, followed by Taisei (Hokkaido) with 33,000 people, and Matsumae with 36,000 people. The five regions with populations under 50,000 are, Kitahiyama (39,000), and Wakkanai (40,000), all in Hokkaido. Additionally, the only other regions with populations under 100,000 are these five regions plus Nogyu (Aomori, 80,000) and Gamanosawa (Aomori, 83,000), totaling seven regions. For reference, in 2010, Fukushima Daiichi (Fukushima) had 492,000 people, but in

the same year, Amakusa (Kumamoto) ranked 14th with 567,000 people.

When looking at the 80 km radius where the U.S. Embassy in Japan issued an evacuation advisory for its citizens, the rankings remain the same for the 10 km, 20 km, 30 km, and 50 km radii, with the first place being Koganemaru (Fukuoka) at 6.49 million people, and the second place being Shima (Fukuoka) at 6.43 million people. The third-ranked Kakuizhima (Okayama) has 6.17 million people, and the fourth place is Chikazaki (Saga) with 5.01 million people, with these four regions exceeding 4 million people.

Regions exceeding 2 million include Hidaka (Wakayama) with 3.42 million, Hohoku (Yamaguchi) with 2.86 million, and Hamamasu (Hokkaido) with 2.79 million, Miyama (Mie) with 2.78 million, Ashihama (Mie) with 2.48 million, Takatsu (Shimane) with 2.36 million, Hagi-Sanmi (Yamaguchi) with 2.01 million, with 11 regions exceeding 2 million. Only two regions have populations below 100,000, with the smallest being Wakkanai (Hokkaido) at 63,000 and Taisei (Hokkaido) at 76,000.

In 2010, Fukushima Daiichi (Fukushima) had a population of 1.98 million, ranking second to Togi_Suzu (Ishikawa) with 2.07 million in the top 15. Regions with fewer people include Kuromatsu (Shimane) with 1.96 million and 39 other areas.

This area is mostly not designated as a mandatory evacuation zone and has primarily undergone recovery efforts through decontamination projects. However, even if residents evacuated, they would not be eligible for ongoing compensation, with only partial compensation having been paid. Assuming that contamination similar to that caused by the Fukushima accident spreads and similar partial compensation payments occur, compensation payments within an 80 km radius would be feasible for 39 locations, and, compensation payments would be impossible within the budgetary scope of existing power companies.

CEZ/The Chernobyl standard (100 km radius) corresponds to the area covered by soil contamination maps created in Japan after the Fukushima accident and includes regions where contamination spread beyond the northern part of Ukraine, as the nuclear power plant site, following the Chernobyl accident. It's noted that contamination has actually spread beyond the 100 km radius not only in Ukraine but also in Belarus and Russia.

Within the 10 km, 20 km, 30 km, 50 km, and 80km zones, the top-ranked area is Koganemaru (Fukuoka). The ranking had remained consistent with Shima (Fukuoka) in second place, but within the 100 km radius, the top position was held by Hidaka (Wakayama) with 11.9 million people, followed by Miyama (Mie) with 11.5 million people, and Ashihama (Mie) with 11.3 million people, with three regions exceeding 10 million people. This was followed by Kakuizhima (Okayama) with 9.66 million people, Koganemaru (Fukuoka) with 8.00 million people, Shima (Fukuoka) with 7.70 million people, Kumano (Mie) with 6.77 million people, Chikazaki (Saga) with 6.57 million people, and Hohoku (Yamaguchi) with 5.50 million people, all exceeding 5 million people. The only area with fewer than 100,000 people is Wakkanai (Hokkaido) with 69,000 people, and the only areas with fewer than 1 million people are Tori-maki (Hokkaido) with 241,000 people, Kitahiyama (Hokkaido) with 400,000 people, Matsumae (Hokkaido) with 474,000 people, Kozo (Wakayama) with 850,000 people, and Nachi-Katsuura (Wakayama) with 915,000 people, totaling six areas.

The 100 km radius is an area that has been the focus of soil contamination maps and inten-

Figure 2: Overview of areas where nuclear power plant construction has been suspended

No.	Planned Nuclear Power Plant Name	Prefecture name where location was planned	Municipalities where construction was planned (1975)	Municipalities where construction was planned (2020)	Electric power company that was scheduled to have jurisdiction	Planned year	Latitude and longitude information of the standing point
							Latitude Longitude
1	Wakkanai (Hokkaido)	Hokkaido	Wakkanai City	Wakkanai City	Hokkaido Electric Power Company	1975	45.48261 141.96973
2	Taisei (Hokkaido)	Hokkaido	Taisei Town	Taisei Town	Hokkaido Electric Power Company	1976	42.25978 139.74736
3	Hamamatsu (Hokkaido)	Hokkaido	Hamamatsu Village	Hamamatsu Village	Hokkaido Electric Power Company	1975	43.572083 141.395083
4	Torihaki (Hokkaido)	Hokkaido	Shimadani Village	Shimadani Village	Hokkaido Electric Power Company	1975	42.665922 139.669192
5	Kiashiyama (Hokkaido)	Hokkaido	Kiashiyama Town	Seina Town	Hokkaido Electric Power Company	1975	42.447433 139.871527
6	Matsunae (Hokkaido)	Hokkaido	Matsunae Town	Matsunae Town	Hokkaido Electric Power Company	1975	41.412350 140.188004
7	Shiura (Aomori Prefecture)	Aomori Prefecture	Shiura Village	Goshogawara City	Toboku Electric Power Company	1975	41.088509 140.3291762
8	Gamanosawa (Aomori Prefecture)	Aomori Prefecture	Higashidori Village	Higashidori Village	Toboku Electric Power Company	1975	41.313728 141.333038
9	Noushi (Aomori Prefecture)	Aomori Prefecture	Higashidori Village	Higashidori Village	Toboku Electric Power Company	1975	41.343178 141.33746
10	Shimokita (Aomori Prefecture)	Aomori Prefecture	Mutsu City	Mutsu City	Toboku Electric Power Company	1975	41.432165 141.1375028
11	Kamikita (Aomori Prefecture)	Aomori Prefecture	Kamikita Town	Toboku Town	Toboku Electric Power Company	1975	40.733212 141.261475
12	Asunai (Akita Prefecture)	Akita Prefecture	Noshiro City	Noshiro City	Toboku Electric Power Company	1975	40.171936 139.9903294
13	Tsuruoka (Yamagata Prefecture)	Yamagata Prefecture	Tsuruoka City	Tsuruoka City	Toboku Electric Power Company	1975	38.787858 139.765644
14	Taro (Iwate Prefecture)	Iwate Prefecture	Taro Town	Miyako City	Toboku Electric Power Company	1975	39.751129 142.003982
15	Honami (Iwate Prefecture)	Iwate Prefecture	Kuji City	Kuji City	Toboku Electric Power Company	1975	40.253039 141.518800
16	Tanohata (Iwate Prefecture)	Iwate Prefecture	Tanohata Village	Tanohata Village	Toboku Electric Power Company	1975	39.912833 141.9484817
17	Maki (Niigata Prefecture)	Niigata Prefecture	Maki Town	Niigata City	Toboku Electric Power Company	1969	37.761958 138.806069
18	Namie (Niigata Prefecture)	Fukushima Prefecture	Namie Town Otsu Town	Namie Town Minamisoma City	Toboku Electric Power Company	1967	37.513389 141.034194
19	Shimofuru Suzu (Ishikawa Prefecture)	Ishikawa Prefecture	Uchiura Town	Noto Town	Hokuriku Electric Power Company	1975	37.228926 137.2511456
20	Togi Suzu (Ishikawa Prefecture)	Ishikawa Prefecture	Togi Town	Shika Town	Hokuriku Electric Power Company	1975	37.115387 136.734512
21	Kumano (Mie Prefecture)	Mie Prefecture	Kumano City	Kumano City	Chubu Electric Power Company	1971	33.865222 136.131851
22	Ashihama (Mie Prefecture)	Mie Prefecture	Nanto Town Kisei Town	Minami-Ise Town Old Town	Chubu Electric Power Company	1963	34.219444 136.427500
23	Miyama (Mie Prefecture)	Mie Prefecture	Miyama Town	Kihoku Town	Chubu Electric Power Company	1961	34.128871 136.282242
24	Nachi-Katsura (Wakayama Prefecture)	Wakayama Prefecture	Nachi-Katsura Town	Nachi-Katsura Town	Kansai Electric Power Company	1969	33.557644 135.9014528
25	Koza (Wakayama Prefecture)	Wakayama Prefecture	Koza Town	Kushimoto Town	Kansai Electric Power Company	1968	33.540311 135.893397
26	Hidaka (Wakayama Prefecture)	Wakayama Prefecture	Hidaka Town	Hidaka Town	Kansai Electric Power Company	1975	33.926722 135.065444
27	Hikigawa (Wakayama Prefecture)	Wakayama Prefecture	Hikigawa Town	Shirahama Town	Kansai Electric Power Company	1976	33.583930 135.4001873
28	Kasumi (Hyogo Prefecture)	Hyogo Prefecture	Kasumi Town	Kami Town	Kansai Electric Power Company	1975	35.648962 134.610608
29	Hanasaka (Hyogo Prefecture)	Hyogo Prefecture	Hanasaka Town	Shio-Onsen Town	Kansai Electric Power Company	1969	35.610522 134.4307321
30	Kumihama (Kyoto Prefecture)	Kyoto Prefecture	Kumihama Town	Kyotango City	Kansai Electric Power Company	1975	35.648286 134.8752495
31	Kakuhira (Osagawa Prefecture)	Osagawa Prefecture	Hinase Town	Bizen City	Chugoku Electric Power	1975	35.137208 134.598864
32	Aoya (Tottori Prefecture)	Tottori Prefecture	Aoya Town	Tottori City	Chugoku Electric Power	1981	35.527046 134.07268
33	Kurumatsi (Shimane Prefecture)	Shimane Prefecture	Gotsu City	Gotsu City	Chugoku Electric Power	1975	33.060651 132.310239
34	Takatsu (Shimane Prefecture)	Shimane Prefecture	Masuda City	Masuda City	Chugoku Electric Power	1975	34.690621 131.807078
35	Tanagawa (Yamaguchi Prefecture)	Yamaguchi Prefecture	Tanagawa Town	Hagi City	Chugoku Electric Power	1975	34.676519 131.670558
36	Houhoku (Yamaguchi Prefecture)	Yamaguchi Prefecture	Houhoku Town	Shimonoseki City	Chugoku Electric Power	1975	34.287840 130.668802
37	Hagi Sumi (Yamaguchi Prefecture)	Yamaguchi Prefecture	Hagi City	Hagi City	Chugoku Electric Power	1982	34.387906 131.340515
38	Aran (Tokushima Prefecture)	Tokushima Prefecture	Aran City	Aran City	Shikoku Electric Power	1976	33.831833 134.716528
39	Tsushima (Ehime Prefecture)	Ehime Prefecture	Tsushima Town	Uwajima City	Shikoku Electric Power	1975	33.058983 132.44656
40	Hwasu (Tokushima Prefecture)	Tokushima Prefecture	Hwasu Town	Minat Town	Shikoku Electric Power	1975	33.769114 134.524658
41	Kainan (Tokushima Prefecture)	Tokushima Prefecture	Kainan Town	Kainan Town	Shikoku Electric Power	1975	33.584344 134.342833
42	Kochi (Kochi Prefecture)	Kochi Prefecture	Saga Town	Kuroshio Town	Shikoku Electric Power	1975	33.064240 133.1031245
43	Kubokawa (Kochi Prefecture)	Kochi Prefecture	Kubokawa Town	Kubokawa Town	Shikoku Electric Power	1976	33.202639 133.234028
44	Shima (Fukuoka Prefecture)	Fukuoka Prefecture	Shima Town	Ioshima City	Kyushu Electric Power	1975	33.622668 130.163192
45	Chikazaki (Saga Prefecture)	Saga Prefecture	Genkai Town	Genkai Town	Kyushu Electric Power	1975	33.518033 129.82925
46	Koganeharu (Fukuoka Prefecture)	Fukuoka Prefecture	Shima Town	Ioshima City	Kyushu Electric Power	1975	33.585759 130.160468
47	Takayanagi (Oita Prefecture)	Oita Prefecture	Kamae Town	Saeki City	Kyushu Electric Power	1960	32.807920 131.550333
48	Kamae (Oita Prefecture)	Oita Prefecture	Kamae Town	Saeki City	Kyushu Electric Power	1981	32.802284 131.095011
49	Sadowara (Miyazaki Prefecture)	Miyazaki Prefecture	Sadowara Town	Miyazaki City	Kyushu Electric Power	1975	32.040525 131.488035
50	Anakusa (Kumamoto Prefecture)	Kumamoto Prefecture	Anakusa Town	Anakusa City	Kyushu Electric Power	1975	32.536623 129.578840
51	Uchinoura (Kagoshima Prefecture)	Kagoshima Prefecture	Uchinoura Town	Kamohara Town	Kyushu Electric Power	1975	31.167104 130.986224
52	Kushima (Miyazaki Prefecture)	Miyazaki Prefecture	Kushima City	Kushima City	Kyushu Electric Power	1992	31.382417 131.253444
-	Kaminosaki (Yamaguchi Prefecture)	Yamaguchi Prefecture	Kaminosaki Town	Kaminosaki Town	Chugoku Electric Power	1981	33.806663 132.058591

Source : Same as Figure 1.

Figure 3: Population of municipalities where nuclear power plant construction has been suspended

No.	Planned Nuclear Power Plant Name	Population in 1980 (excluding mergers)	Population in 1980 (including merged areas)	Population in 2020 (excluding mergers)	Population in 2020 (including merged areas)	Merged or not	Population growth rate (1980-2020) (excluding mergers)	Population growth rate (1980-2020) (including merged areas)	Population within 100 km of nuclear power plants (2020)
1	Wakkanai (Hokkaido)	53,471	—	33,563	—	No	-37.2%	—	69,320
2	Taisei (Hokkaido)	3,813	16,051	1,375	7,398	Yes	-63.9%	-53.9%	474,300
3	Hamamatsu (Hokkaido)	3,977	40,783	1,206	56,869	Yes	-69.7%	39.4%	3,320,575
4	Torimaki (Hokkaido)	3,138	—	1,356	—	No	-56.8%	—	241,496
5	Kitahiyama (Hokkaido)	8,073	16,051	4,508	7,398	Yes	-44.2%	-53.9%	400,017
6	Matsumae (Hokkaido)	17,524	—	6,260	—	No	-64.3%	—	1,149,417
7	Shiura (Aomori Prefecture)	4,059	68,738	1,791	51,415	Yes	-55.9%	-25.2%	1,391,749
8	Gamanosawa (Aomori Prefecture)	9,975	—	5,955	—	No	-40.3%	—	1,307,323
9	Noushi (Aomori Prefecture)	9,975	—	5,955	—	No	-40.3%	—	1,263,959
10	Shimokita (Aomori Prefecture)	71,567	—	47,610	—	No	-33.5%	—	1,107,832
11	Kamikita (Aomori Prefecture)	10,473	22,587	8,246	16,428	Yes	-21.3%	-27.3%	1,513,903
12	Asanai (Akita Prefecture)	60,674	76,028	42,785	49,968	Yes	-29.5%	-34.3%	1,479,657
13	Tsuruoka (Yamagata Prefecture)	122,347	153,330	87,894	99,751	Yes	-28.2%	-34.9%	1,495,631
14	Taro (Iwate Prefecture)	5,710	78,617	2,855	50,369	Yes	-50.0%	-35.9%	1,277,351
15	Honami (Iwate Prefecture)	39,013	43,683	30,830	33,043	Yes	-21.0%	-24.4%	1,178,648
16	Tanohata (Iwate Prefecture)	5,225	—	3,059	—	No	-41.5%	—	1,285,499
17	Maki (Niigata Prefecture)	11,972	730,733	27,846	789,275	Yes	132.6%	8.0%	2,253,495
18	Namie-Odaka (Fukushima Prefecture)	96,897	37,208	8,937	60,928	Yes	-90.8%	63.7%	3,678,909
19	Shiromaru_Suzu (Ishikawa Prefecture)	10,273	31,277	5,152	15,687	Yes	-49.8%	-49.8%	1,760,141
20	Togi_Suzu (Ishikawa Prefecture)	13,241	30,636	5,950	18,630	Yes	-55.1%	-39.2%	2,172,522
21	Kumano (Mie Prefecture)	26,062	28,720	14,945	15,965	Yes	-42.7%	-44.4%	6,777,300
22	Ashihama (Mie Prefecture)	16,961	38,027	8,706	18,804	Yes	-48.7%	-50.6%	11,332,335
23	Miyama (Mie Prefecture)	12,776	26,268	7,132	14,604	Yes	-44.2%	-44.4%	11,557,838
24	Nachi-Katsuura (Wakayama Prefecture)	23,006	—	14,137	—	No	-38.6%	—	915,590
25	Koza (Wakayama Prefecture)	7,404	26,256	3,817	14,959	Yes	-48.4%	-43.0%	850,593
26	Hidaka (Wakayama Prefecture)	6,973	—	7,673	—	No	10.0%	—	11,914,088
27	Hikigawa (Wakayama Prefecture)	6,400	26,617	3,044	20,262	Yes	-52.4%	-23.9%	2,363,340
28	Kasumi (Hyogo Prefecture)	15,520	26,694	10,088	16,064	Yes	-35.0%	-39.8%	2,324,052
29	Hamasaka (Hyogo Prefecture)	12,821	21,514	8,342	13,318	Yes	-34.9%	-38.1%	2,389,851
30	Kumihama (Kyoto Prefecture)	13,178	72,966	8,842	50,860	Yes	-32.9%	-30.3%	2,743,449
31	Kakuizhima (Okayama Prefecture)	10,821	49,306	6,763	32,320	Yes	-37.5%	-34.5%	9,663,476
32	Aoya (Tottori Prefecture)	9,312	184,601	5,591	188,465	Yes	-40.0%	2.1%	2,648,276
33	Kuromatsu (Shimane Prefecture)	28,264	32,785	20,637	22,959	Yes	-27.0%	-30.0%	2,874,060
34	Takatsu (Shimane Prefecture)	52,756	59,040	42,367	45,003	Yes	-19.7%	-23.8%	3,272,258
35	Tamagawa (Yamaguchi Prefecture)	5,421	74,846	2,383	44,626	Yes	-56.0%	-40.4%	3,118,988
36	Houhoku (Yamaguchi Prefecture)	18,038	325,478	8,338	255,051	Yes	-53.8%	-21.6%	5,506,246
37	Hagi_Sanmi (Yamaguchi Prefecture)	53,693	74,846	35,135	44,626	Yes	-34.6%	-40.4%	3,611,736
38	Anan (Tokushima Prefecture)	61,253	82,715	46,343	69,470	Yes	-24.3%	-16.0%	4,223,331
39	Tsushima (Ehime Prefecture)	16,061	110,920	9,474	70,809	Yes	-41.0%	-36.2%	2,001,646
40	Hiwasa (Tokushima Prefecture)	7,142	11,866	4,142	6,222	Yes	-42.0%	-47.6%	3,161,894
41	Kainan (Tokushima Prefecture)	6,856	14,397	4,551	8,358	Yes	-33.6%	-41.9%	2,583,296
42	Saga (Kochi Prefecture)	4,986	16,116	2,983	10,262	Yes	-40.2%	-36.3%	1,685,659
43	Kubokawa (Kochi Prefecture)	17,646	26,438	11,632	15,607	Yes	-34.1%	-41.0%	1,977,225
44	Shima (Fukuoka Prefecture)	14,335	66,220	16,564	98,877	Yes	15.5%	49.3%	7,707,163
45	Chikazaki (Saga Prefecture)	7,463	—	5,609	—	No	-24.8%	—	6,579,754
46	Koganemaru (Fukuoka Prefecture)	14,335	66,220	16,564	98,877	Yes	15.5%	49.3%	8,004,760
47	Takayama-Kamae (Oita Prefecture)	11,258	96,534	6,328	54,306	Yes	-43.8%	-43.7%	1,666,135
48	Kamae (Oita Prefecture)	11,258	96,534	6,328	66,851	Yes	-43.8%	-30.7%	1,706,708
49	Sadowara (Miyazaki Prefecture)	26,932	329,751	32,797	401,339	Yes	21.8%	21.7%	1,872,291
50	Amakusa (Kumamoto Prefecture)	6,514	121,574	2,607	75,783	Yes	-60.0%	-37.7%	3,797,853
51	Uchinoura (Kagoshima Prefecture)	6,863	23,361	2,677	14,227	Yes	-61.0%	-39.1%	2,059,110
52	Kushima (Miyazaki Prefecture)	29,420	—	16,822	—	No	-42.8%	—	2,154,107
-	Kaminoseki (Yamaguchi Prefecture)	6,773	—	2,342	—	No	-65.4%	—	5,147,698

Source: Compiled based on the 1980 and 2020 national censuses.

Note 1: If a municipality merged between 1980 and 2020, the figures include those of the municipality as of 1980, assuming the merger occurred in 1980. These are shown as “1980 population (including mergers).”

Note 2: For municipalities that underwent mergers between 1980 and 2020, the population residing in the area of the municipality designated for nuclear power plant construction in the 1980s is shown as “2020 Population (excluding merger-related changes).”

Note 3: For nuclear power plant sites spanning multiple municipalities, the population figures are the sum of the populations of each municipality. Additionally, if a municipality has undergone a merger, the population calculations for both merged and unmerged municipalities are the same as those in Notes 1 and 2.

Figure 5: Population in areas where nuclear power plant construction has been suspended (2010)

No.	PLZ (5 km radius)	Conventional disaster preparedness zone (10 km radius)	2011 evacuation order (20 km radius)	UZF/2011 inland power plant population	Tanishi area (9 km radius)	US Embassy (about 90 km radius)	CEZ/Chubu's standard (100 km radius)
	People	Name of nuclear power plant population	People	Name of nuclear power plant population	People	Name of nuclear power plant population	People
1	Koganezumi (Fukushima)	33,510	Koganezumi (Fukushima)	1,942,971	3,774,822	Koganezumi (Fukushima)	12,190,796
2	Satouma (Miyazaki)	90,626	Shima (Fukushima)	1,862,600	3,657,024	Shima (Fukushima)	11,875,572
3	Takatsuki (Shimane)	92,497	Satouma (Miyazaki)	971,465	2,508,702	Kashima (Chiba)	11,621,321
4	Asanaka (Aichi)	80,448	Maki (Niigata)	540,871	1,363,223	Chikazaki (Saga)	9,919,937
5	Tsukuba (Ibaraki)	86,748	Tsukuba (Ibaraki)	530,871	1,632,231	Hidaka (Wakayama)	8,887,933
6	Maki (Niigata)	56,539	Kanuma (Aomori)	311,154	1,237,967	Miyama (Mie)	8,116,387
7	Asanaka (Aichi)	52,304	Kakuhira (Chiba)	281,340	1,179,670	Honohu (Yamaguchi)	7,129,859
8	Kesumi (Hyogo)	43,912	Ayza (Tohoku)	275,582	808,944	Hamasu (Hokkaido)	6,629,149
9	Hagami (Saitama)	43,640	Hidaka (Wakayama)	255,582	803,869	Asahikawa (Sagami)	5,487,120
10	Asahikawa (Sagami)	38,763	Chikazaki (Saga)	255,582	803,869	Takatsuki (Shimane)	4,453,873
11	Hamasu (Hokkaido)	37,859	Maki (Niigata)	243,889	742,710	Asahikawa (Sagami)	4,072,466
12	Kanuma (Aomori)	35,651	Kanuma (Aomori)	200,032	616,887	Maki (Niigata)	3,854,928
13	Kakuhira (Chiba)	8,103	Hidaka (Wakayama)	198,495	580,002	Asahikawa (Sagami)	3,366,723
14	Shima (Fukushima)	23,998	Kanuma (Aomori)	164,128	485,127	Tsukuba (Ibaraki)	3,366,723
15	Hagami (Saitama)	22,978	Maki (Niigata)	146,128	485,127	Tsukuba (Ibaraki)	3,366,723
16	Shimizu (Shizuoka)	20,047	Tsukuba (Ibaraki)	146,128	485,127	Tsukuba (Ibaraki)	3,366,723
17	Shimizu (Shizuoka)	20,047	Asahi (Aichi)	146,128	485,127	Tsukuba (Ibaraki)	3,366,723
18	Hamasu (Hokkaido)	19,659	Kanuma (Aomori)	146,128	485,127	Tsukuba (Ibaraki)	3,366,723
19	Kanuma (Aomori)	18,946	Tsukuba (Ibaraki)	146,128	485,127	Tsukuba (Ibaraki)	3,366,723
20	Chikazaki (Saga)	18,351	Gamaosawa (Aomori)	132,479	403,462	Kanuma (Aomori)	2,986,661
21	Tsukuba (Ibaraki)	18,471	Nachi-Katsura (Wakayama)	132,479	403,462	Kanuma (Aomori)	2,986,661
22	Miyama (Mie)	14,787	Noushi (Aomori)	123,572	424,951	Kanuma (Aomori)	2,986,661
23	Nachi-Katsura (Wakayama)	14,787	Shimoda (Shimane)	116,980	418,766	Kanuma (Aomori)	2,986,661
24	Shimoda (Shimane)	14,787	Taro (Iwate)	114,585	418,766	Kanuma (Aomori)	2,986,661
25	Kanuma (Aomori)	14,787	Hidaka (Wakayama)	103,928	404,049	Kanuma (Aomori)	2,986,661
26	Kanuma (Aomori)	14,787	Kanuma (Aomori)	103,928	404,049	Kanuma (Aomori)	2,986,661
27	Maki (Niigata)	13,702	Honohu (Yamaguchi)	102,327	379,493	Kanuma (Aomori)	2,986,661
28	Kanuma (Aomori)	12,683	Tsukuba (Ibaraki)	102,327	379,493	Kanuma (Aomori)	2,986,661
29	Kanuma (Aomori)	11,568	Saga (Kochi)	94,972	389,123	Kanuma (Aomori)	2,986,661
30	Hidaka (Wakayama)	11,816	Honami (Iwate)	91,038	394,643	Kanuma (Aomori)	2,986,661
31	Saga (Kochi)	10,077	Hamasu (Hokkaido)	87,895	312,177	Kanuma (Aomori)	2,986,661
32	Kanuma (Aomori)	10,292	Kanuma (Aomori)	86,069	312,177	Kanuma (Aomori)	2,986,661
33	Tsukuba (Ibaraki)	9,465	Kanuma (Aomori)	85,979	312,177	Kanuma (Aomori)	2,986,661
34	Honohu (Yamaguchi)	9,465	Kanuma (Aomori)	85,979	312,177	Kanuma (Aomori)	2,986,661
35	Tsukuba (Ibaraki)	9,064	Miyama (Mie)	71,267	222,055	Kanuma (Aomori)	2,986,661
36	Tanohata (Iwate)	8,725	Kanuma (Aomori)	71,267	222,055	Kanuma (Aomori)	2,986,661
37	Hidaka (Wakayama)	8,019	Shimoda (Shimane)	70,339	198,227	Kanuma (Aomori)	2,986,661
38	Asahikawa (Sagami)	8,341	Honohu (Yamaguchi)	70,339	198,227	Kanuma (Aomori)	2,986,661
39	Asahikawa (Sagami)	8,272	Asahikawa (Sagami)	70,339	198,227	Kanuma (Aomori)	2,986,661
40	Kobukawa (Kochi)	8,122	Hwasa (Tokushima)	68,741	171,753	Kanuma (Aomori)	2,986,661
41	Tanagawa (Yamaguchi)	7,736	Kanuma (Aomori)	64,565	168,812	Kanuma (Aomori)	2,986,661

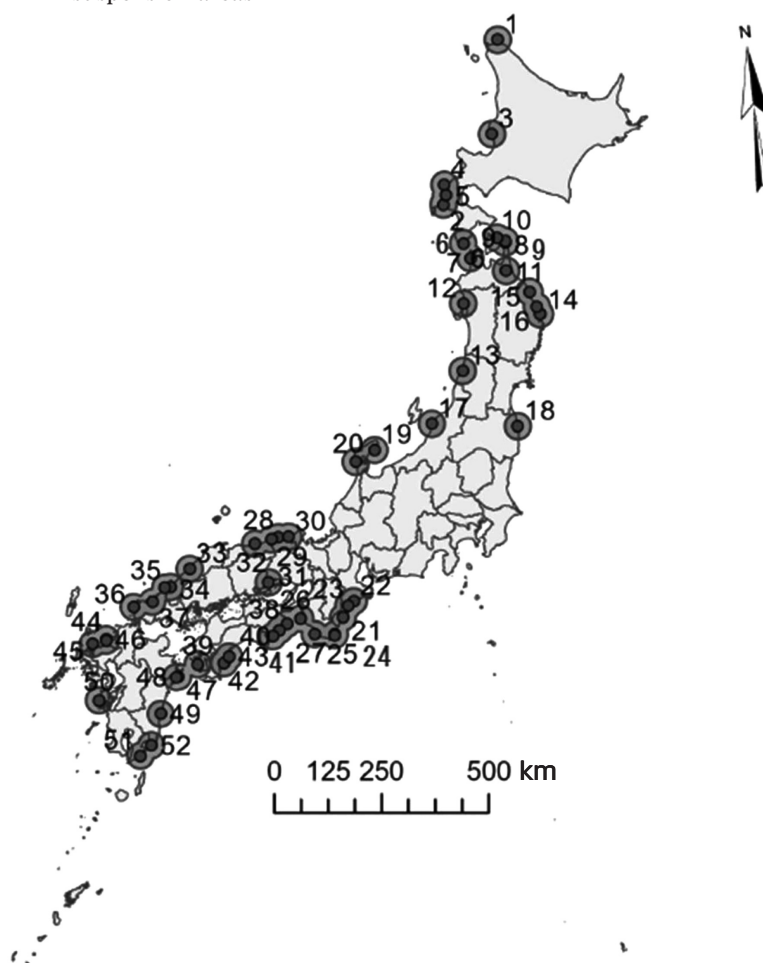
Source: Same as Figures 1, 2, and 3.

Figure 6: Population in areas where nuclear power plant construction has been suspended (2000)

No.	PLZ (5 km radius)	Conventional disaster prevention zone (10 km radius)	2011 evacuation order (20 km radius)	UZF/2011 before evacuation (30 km radius)	Tanri's map (30 km radius)	US Embassy statement (80 km radius)	CEZ/Chernobyl standard (100 km radius)	
	Name of nuclear power plant population	People	Name of nuclear power plant population	People	Name of nuclear power plant population	People	Name of nuclear power plant population	
1	Koganezumi (Fukushima)	122,201	Koganezumi (Fukushima)	556,644	Koganezumi (Fukushima)	3,629,896	Hidaka (Wakayama)	12,210,439
2	Takasu (Shimane)	37,514	Shima (Fukushima)	529,759	Shima (Fukushima)	3,482,791	Myama (Mie)	11,922,825
3	Sadowara (Yamaguchi)	31,466	Sadowara (Yamaguchi)	424,298	Sadowara (Yamaguchi)	424,298	Asahama (Mie)	11,574,825
4	Asama (Aichi)	24,610	Sadowara (Yamaguchi)	424,298	Sadowara (Yamaguchi)	424,298	Kakuzima (Okyama)	10,048,320
5	Tsukuba (Shimane)	36,173	Tsukuba (Shimane)	529,759	Tsukuba (Shimane)	529,759	Koganezumi (Fukushima)	8,175,531
6	Maki (Niigata)	13,961	Maki (Niigata)	13,961	Maki (Niigata)	13,961	Koganezumi (Fukushima)	7,868,089
7	Kamihama (Amori)	11,869	Kamihama (Amori)	11,869	Kamihama (Amori)	11,869	Kumano (Mie)	7,295,921
8	Kasumi (Hyogo)	10,926	Kasumi (Hyogo)	10,926	Kasumi (Hyogo)	10,926	Chikazaki (Saga)	6,659,155
9	Kumano (Mie)	10,315	Takasu (Shimane)	47,747	Hidaka (Wakayama)	12,210,439	Kumano (Mie)	6,435,369
10	Hamasaka (Hyogo)	9,345	Chikazaki (Saga)	41,900	Kamihama (Amori)	881,658	Hidaka (Wakayama)	12,210,439
11	Kanai (Tokushima)	9,303	Kumihama (Kyoto)	40,321	Koganezumi (Fukushima)	3,629,896	Hidaka (Wakayama)	12,210,439
12	Aoya (Tottori)	9,224	Kamihama (Amori)	38,537	Hidaka (Wakayama)	12,210,439	Hidaka (Wakayama)	12,210,439
13	Kakuzima (Okyama)	9,188	Honami (Iwate)	34,262	Hidaka (Wakayama)	12,210,439	Hidaka (Wakayama)	12,210,439
14	Shimokita (Shimane)	8,422	Chikazaki (Saga)	27,577	Kumihama (Kyoto)	40,321	Hidaka (Wakayama)	12,210,439
15	Shimokita (Amori)	7,868	Shimokita (Shimane)	25,059	Hidaka (Wakayama)	12,210,439	Hidaka (Wakayama)	12,210,439
16	Hagi, Sumi (Yamaguchi)	7,868	Nachi-Katsura (Wakayama)	23,693	Asama (Aichi)	89,616	Hidaka (Wakayama)	12,210,439
17	Shima (Fukushima)	7,452	Hamasaka (Hyogo)	22,450	Kumano (Mie)	7,295,921	Hidaka (Wakayama)	12,210,439
18	Honami (Iwate)	6,882	Myama (Mie)	22,377	Takasu (Shimane)	47,747	Hidaka (Wakayama)	12,210,439
19	Kakuzima (Hokkaido)	6,615	Kumano (Mie)	22,317	Nachi-Katsura (Wakayama)	23,693	Hidaka (Wakayama)	12,210,439
20	Togi, Suzu (Ishikawa)	6,353	Kumihama (Kyoto)	21,518	Takasu (Shimane)	47,747	Hidaka (Wakayama)	12,210,439
21	Myama (Mie)	6,293	Anan (Tokushima)	19,962	Koganezumi (Fukushima)	3,629,896	Hidaka (Wakayama)	12,210,439
22	Chikazaki (Saga)	6,251	Shimokita (Shimane)	17,942	Takasu (Shimane)	47,747	Hidaka (Wakayama)	12,210,439
23	Takayama-Kamee (Oita)	6,024	Asahama (Mie)	17,512	Togi, Suzu (Ishikawa)	6,353	Hidaka (Wakayama)	12,210,439
24	Kumihama (Kyoto)	5,963	Koza (Wakayama)	16,477	Shima (Fukushima)	7,452	Hidaka (Wakayama)	12,210,439
25	Nachi-Katsura (Wakayama)	5,863	Togi, Suzu (Ishikawa)	16,395	Noshi (Amori)	1,643	Hidaka (Wakayama)	12,210,439
26	Kurumatsu (Shimane)	4,914	Hikawa (Wakayama)	16,353	Hikawa (Wakayama)	16,353	Hidaka (Wakayama)	12,210,439
27	Kamee (Oita)	4,793	Kasumi (Hyogo)	14,689	Tamagawa (Yamaguchi)	2,447	Hidaka (Wakayama)	12,210,439
28	Hirata (Tokushima)	4,694	Kurumatsu (Shimane)	14,394	Saga (Kochi)	4,204	Hidaka (Wakayama)	12,210,439
29	Maki (Niigata)	4,393	Kanai (Tokushima)	13,948	Koza (Wakayama)	11,871	Hidaka (Wakayama)	12,210,439
30	Saga (Kochi)	4,204	Kushima (Miyazaki)	11,687	Hamasaka (Hyogo)	9,345	Hidaka (Wakayama)	12,210,439
31	Hidaka (Wakayama)	4,123	Kobokawa (Kochi)	11,681	Kasumi (Hyogo)	10,926	Hidaka (Wakayama)	12,210,439
32	Tsushima (Ehime)	3,974	Honohu (Yamaguchi)	11,461	Kumano (Mie)	7,295,921	Hidaka (Wakayama)	12,210,439
33	Shiura (Amori)	3,992	Shimokita (Shimane)	11,481	Kasumi (Hyogo)	10,926	Hidaka (Wakayama)	12,210,439
34	Taro (Iwate)	3,324	Tsushima (Ehime)	11,180	Myama (Mie)	6,293	Hidaka (Wakayama)	12,210,439
35	Honohu (Yamaguchi)	3,439	Matsunaga (Hokkaido)	10,656	Kumano (Mie)	7,295,921	Hidaka (Wakayama)	12,210,439
36	Anabusa (Kumamoto)	3,144	Saga (Kochi)	10,128	Kushima (Miyazaki)	11,687	Hidaka (Wakayama)	12,210,439
37	Hikawa (Wakayama)	3,064	Kamee (Oita)	10,084	Shimokita (Shimane)	17,942	Hidaka (Wakayama)	12,210,439
38	Tanohata (Iwate)	3,021	Takayama-Kamee (Oita)	9,948	Honohu (Yamaguchi)	3,439	Hidaka (Wakayama)	12,210,439
39	Asahama (Mie)	2,997	Asahama (Mie)	9,719	Asahama (Mie)	2,997	Hidaka (Wakayama)	12,210,439
40	Koza (Wakayama)	2,642	Hirata (Tokushima)	9,689	Hirata (Tokushima)	4,694	Hidaka (Wakayama)	12,210,439
41	Tamagawa (Yamaguchi)	2,447	Tamagawa (Yamaguchi)	9,933	Anabusa (Kumamoto)	3,144	Hidaka (Wakayama)	12,210,439
42	Kobokawa (Kochi)	2,424	Kakuzima (Hokkaido)	8,852	Shiura (Amori)	3,992	Hidaka (Wakayama)	12,210,439
43	Matsunaga (Hokkaido)	1,970	Anabusa (Kumamoto)	7,834	Kobokawa (Kochi)	2,424	Hidaka (Wakayama)	12,210,439
44	Noshi (Amori)	1,643	Uchinoura (Kagoshima)	7,884	Uchinoura (Kagoshima)	111	Hidaka (Wakayama)	12,210,439
45	Anan (Tokushima)	1,620	Shiura (Amori)	7,769	Kanai (Tokushima)	9,303	Hidaka (Wakayama)	12,210,439
46	Gannosawa (Amori)	1,574	Tanohata (Iwate)	6,259	Tanohata (Iwate)	3,021	Hidaka (Wakayama)	12,210,439
47	Hamasaka (Hokkaido)	1,548	Noshi (Amori)	4,512	Kakuzima (Okyama)	9,188	Hidaka (Wakayama)	12,210,439
48	Kumihama (Miyazaki)	951	Taisei (Hokkaido)	2,415	Matsunaga (Hokkaido)	1,970	Hidaka (Wakayama)	12,210,439
49	Taisei (Hokkaido)	641	Hanatsu (Hokkaido)	2,299	Taisei (Hokkaido)	641	Hidaka (Wakayama)	12,210,439
50	Wakanaai (Hokkaido)	561	Uchinoura (Kagoshima)	1,546	Wakanaai (Hokkaido)	561	Hidaka (Wakayama)	12,210,439
51	Torinaki (Hokkaido)	443	Hamasaka (Hyogo)	9,345	Taisei (Hokkaido)	641	Hidaka (Wakayama)	12,210,439
52	Uchinoura (Kagoshima)	111	Torinaki (Hokkaido)	318	Torinaki (Hokkaido)	443	Hidaka (Wakayama)	12,210,439
	Fukushima Daiichi (Fukushima)	13,686	Fukushima Daiichi (Fukushima)	47,534	Fukushima Daiichi (Fukushima)	89,616	Fukushima Daiichi (Fukushima)	2,066,089

Source: Same as Figures 1, 2, and 3.

Figure 7: Map of areas within a 30 km radius of nuclear power plant construction suspension areas



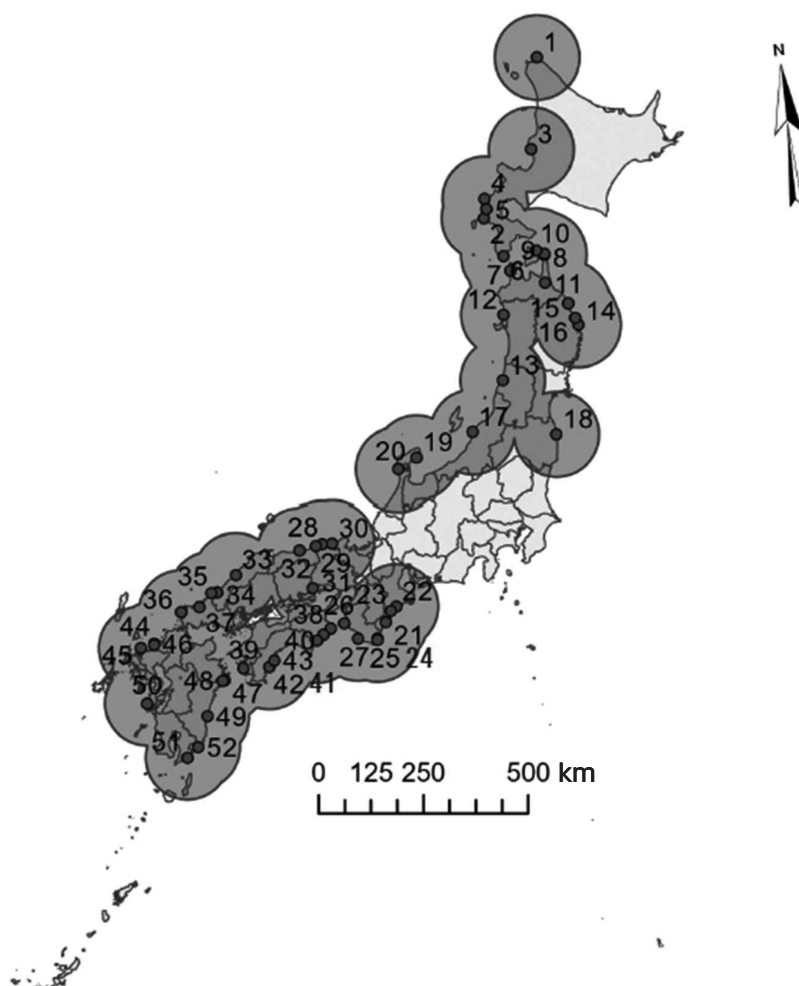
Source: Same as Figures 1, 2, and 3.

Note 1: The numbers on the map correspond to the numbers shown in Figures 2 and 3.

sive spatial radiation measurements. In particular, evacuation advisories within this radius were not officially announced by domestic or international authorities following the Fukushima nuclear disaster. The 2010 figure for Fukushima Daiichi (Fukushima) was 3,614,000, ranking 14th after Hagi-Sanmi (Yamaguchi) at 3,813,000, which was 13th.

Additionally, figure 7 shows a map indicating the 30 km radius zone from the construction suspension area, and figure 8 shows the 100 km radius zone. Figure 9 illustrates the population scale within the 100 km radius zone of the suspension area using the size of circles (Figures 7, 8, and 9).

Figure 8: Map of areas within 100 km of nuclear power plant construction suspension areas



Source: Same as Figures 1, 2, and 3.

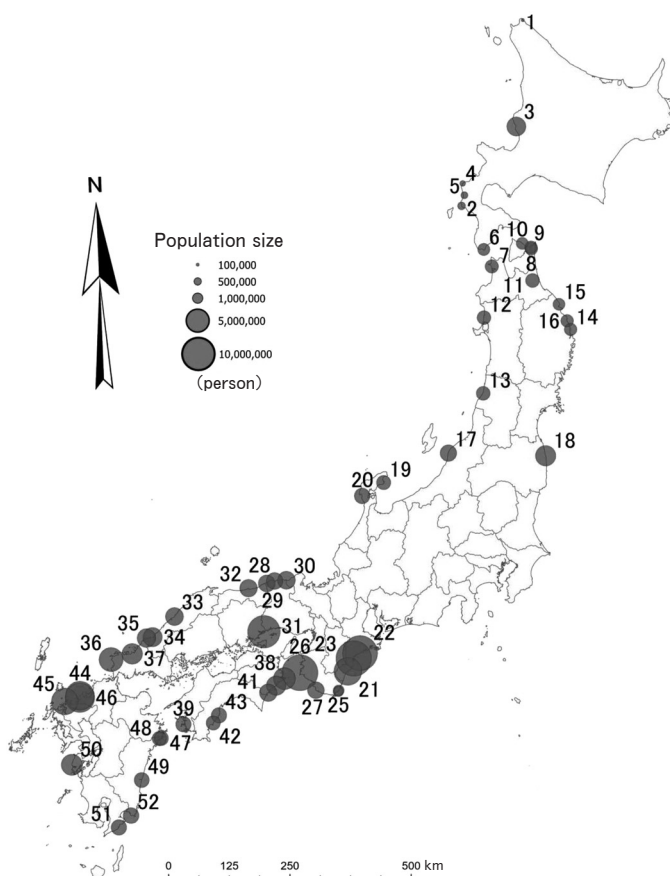
Note 1: The numbers on the map correspond to the numbers shown in Figures 2 and 3.

4 Population by Zone in Areas Where Nuclear Power Plant Construction Has Been Suspended

4-1 Population by zone within the 30 km radius

In Figure 10, looking at the 3 km radius area as of 2020, Takatsu in Masuda City (Shimane) has the largest population at 12,000, followed by Sadowara in Miyazaki Prefecture with 11,000, Koganemaru in Fukuoka Prefecture with 9,309, Kamikita in Aomori Prefecture with 6,344, and Kasumi (Hyogo) at 6,025 people, all exceeding 5,000 people. In the same year, Fukushima Daiichi had 0 people, the lowest number, but in 2010, it had 0.2 million people, ranking eighth from the top. Natchi-Katsuura (Wakayama) ranked 30th with 979 people, and the 23 regions below it had fewer than 1,000 people, with the smallest being Wakkanai

Figure 9: Population within a 100 km radius of planned nuclear power plant sites



Source: Same as Figures 1, 2, and 3.

(Hokkaido) with 18 people. For reference, in Figure 11, Fukushima Daiichi (Fukushima) had 2,780 people in 2010, which was second only to Shiromaru-Suzu (Ishikawa) with 2,796 people in the same year (Figures 10, 11, and 12).

Within a 3–5 km radius, Koganemaru (Fukuoka) has the highest population at 28,000, followed by Sadowara (Miyazaki) with 20,000, Asanai (Akita) with 18,000, and Takatsu (Shimane) with 16,000, making four regions exceed 10,000. In 39th place, Hohoku (Yamaguchi) has 822 people, and the 14 regions below this have fewer than 1,000 people, with the smallest being Uchinoura (Kagoshima) with 3 people. For reference, in 2010, Fukushima Daiichi (Fukushima) had 10,000, which was the fourth highest in the country, following Takatsu (Shimane).

Within the 5–10 km radius, the top three are Koganemaru (Fukuoka) with 109,000 people, Shima (Fukuoka) with 106,000 people, and Tsuruoka (Yamagata) with 74,000 people, all exceeding 50,000 people. The 20th place, Kumano (Mie), has 9,989 people, and the remaining 33 regions have fewer than 10,000 people.

The smallest is Torimaki (Hokkaido) with 100 people, followed by Hamamasu (Hokkaido)

with 273 people, Wakkanai (Hokkaido) with 604 people, Uchinoura (Kagoshima) with 694 people, and Taisei (Hokkaido) with 827 people, all of which have fewer than 1,000 people. For reference, Fukushima Daiichi (Fukushima) had 33,000 people in 2010, which was second to Hidaka (Wakayama) with 34,000 people in the same year.

Within the 10–20 km zone, Koganemaru (Fukuoka) has 527,000 people, Shima (Fukuoka) has 498,000 people, and the areas exceeding 100,000 people are Sadowara (Miyazaki) with 337,000 people, Maki (Niigata) with 248,000 people, Tsuruoka (Yamagata) with 140,000, Kamikita (Aomori) with 138,000, and Aoya (Tottori) with 117,000. The smallest is Hamamasu (Hokkaido) with 628, the only area with fewer than 1,000 people. The 45th-ranked Tanohata (Iwate) has 9,160 people, and the eight regions below it have fewer than 10,000 people. In 2010, Fukushima Daiichi (Fukushima) had 30,000, which is the second-lowest figure in the country, following Kushima (Miyazaki) with 31,000 in the same year.

Within a 20–30 km radius, Shima (Fukuoka) has 1,446,000 people and Koganemaru (Fukuoka) has 1,427,000 people, both exceeding 1 million. Next is Maki (Niigata) with 577,000 people, followed by Sadowara (Miyazaki) with 101,000 people. Only eight regions have populations under 10,000, with the smallest being Hamamasu (Hokkaido) with 685 people, followed by Kitahiyama (Hokkaido) with 1,727 people, Matsumae (Hokkaido) with 5,163 people, and Gamanosawa (Aomori) with 8,020 people, Nogyu (Aomori) with 8,297 people, Shiromaru_Suzu (Ishikawa) with 8,657 people, and Taisei (Hokkaido) with 9,516 people, and Torimaki (Hokkaido) with 9,679 people. In 2010, Fukushima Daiichi (Fukushima) had 61,000 people, but it was followed by Amakusa (Kumamoto) with 65,000 people, ranking 22nd.

4-2 Population by zone outside the 30 km zone

The area outside the 30 km zone, which is not a mandatory evacuation zone but primarily subject to decontamination efforts and reconstruction policies, will be examined. In the 30–40 km zone, the highest population is in Kakuizhima (Okayama) at 922,000, followed by Koganemaru (Fukuoka) at 892,000 and Shima (Fukuoka) at 718,000, all exceeding 500,000. The 18th highest is Hagi-Sanmi (Yamaguchi) at 100,000, exceeding 100,000.

The lowest figure is 875 in Wakkanai (Hokkaido), the only area with fewer than 1,000 people. Including this, the total population of the Sanmi (Hokkaido) with 4,044 people, Torimaki (Hokkaido) with 6,792 people, Nogyu (Aomori) with 7,727 people, and Gamanosawa (Aomori) with 8,898 people, all have fewer than 10,000 people. In 2010, Fukushima Daiichi (Fukushima) had 91,000 people, but it ranked 25th, following Namie-Odaka (Fukushima) with 73,000 people, and was below the median.

Within a 40–50 km radius, Shima (Fukuoka) had 1.02 million people, and Kakuizhima (Okayama) had 1.01 million people, exceed 1 million people, followed by Koganemaru (Fukuoka) with 938,000, Houhoku (Yamaguchi) with 826,000, and Chikazaki (Saga) with 759,000, all exceeding half million. The smallest population is 4,291 in Wakkanai (Hokkaido), and together with Torimaki (Hokkaido) at 7,611, making these two regions the only ones with fewer than 10,000 people. In 2010, Fukushima Daiichi had a population of 262,000, ranking 14th, while Ashihama (Mie) had 267,000.

Within the 50–60 km zone, the four regions with populations exceeding 1 million are Hamamasu (Hokkaido) with 1.67 million, Chikazaki (Saga) with 1.59 million, Kakuizhima (Okayama) with 1.25 million, and Shima (Fukuoka) with 1.00 million, all exceeding 1 million people. The 10th-ranked Takayama-Kamae (Oita) had 529,000 people, with all areas exceeding 500,000 people. The lowest figures were recorded in Wakkanai (Hokkaido) with 5,142 and Kitahiyama (Hokkaido) with 7,514, with only these two regions falling below 10,000. In 2010, Fukushima Daiichi had 556,000 people, ranking 9th, followed by Hidaka (Wakayama) with 600,000.

In the 60–70 km zone, there are three areas with over 1 million people: Takatsu (Shimane) with 1.27 million, Kakuizhima (Okayama) with 1.25 million, and Chikazaki (Saga) with 1.22 million. The smallest is Wakkanai (Hokkaido) with 7,100, the only area with fewer than 10,000 people. In 2010, the population of Fukushima Daiichi had a population of 654,000, ranking 9th, followed by Namie-Odaka (Fukushima) with 687,000.

The 70–80 km zone also has six areas with populations exceeding 1 million, including Miyama (Mie) with 1.30 million, Tamagawa (Yamaguchi) with 1.23 million, Kakuizhima (Okayama) with 1.21 million, Hidaka (Wakayama) with 1.19 million, Ashihama (Mie) with 1.10 million, and Kuro Matsubara (Shimane) with 1.09 million. The smallest is Taisei (Hokkaido) with 9,620 people, the only one with fewer than 10,000 people. Including Taisei, seven regions have populations under 100,000: Wakkanai (Hokkaido) with 11,000, Torimaki (Hokkaido) with 35,000, Kitahiyama (Hokkaido) with 41,000, Nachi-katsuura (Wakayama) with 47,000, Kozo (Wakayama) with 47,000, and Shiura (Aomori) with 76,000. In 2010, Fukushima Daiichi had a population of 284,000, ranking 31st, just behind Amakusa (Kumamoto) with 297,000, but far below the median.

Within the 80–90 km radius, there are six regions with populations exceeding 1 million, including Miyama (Mie) with 3.56 million, Hidaka (Wakayama) with 3.35 million, Ashihama (Mie) with 2.35 million, Kumano (Mie) with Maki (Nigata) with 1.06 million, Kakuizhima (Okayama) with 1.40 million, and. The smallest is Wakkanai (Hokkaido) with 4,721 people, the only area with fewer than 10,000 people. Including Wakkanai, the five regions with populations below 100,000 are Torimaki (Hokkaido) with 59,000 people, Kamikita (Aomori) with 70,000 people, Taisei (Hokkaido) with 76,000 people, and Kitahiyama (Hokkaido) with 87,000 people. In 2010, Fukushima Daiichi had a population of 382,000, ranking 25th, following Aoya (Tottori) with 419,000, but below the median.

Within the 90–100 km radius, there are 11 regions with populations exceeding 1 million, including Ashihama (Mie) with 6.49 million, The population of Miyama (Mie) is 5.26 million, and that of Hidaka (Wakayama) is 5.13 million, both exceeding 5 million. The population of Kumano (Mie) is 3.98 million, that of Kakuizhima (Okayama) is 2.08 million, that of Hohoku (Yamaguchi) is 1.65 million, that of Anan (Tokushima) is 1.62 million, Kumihama (Kyoto) with 1.33 million, Amakusa (Kumamoto) with 1.25 million, Aoya (Tottori) with 1.19 million, and Hikigawa (Wakayama) with 1.10 million all exceed 1 million.

The smallest is 681 in Wakkanai (Hokkaido), and including the second-smallest, Kamikita (Aomori) with 59,000, those with fewer than 100,000 include 75,000 in Togi-Suzu (Ishikawa), 77,000 in Torimaki (Hokkaido), and 77,000 in Hamamasu (Hokkaido).

Figure 10: (continued)

Rank	Within 0-50 km			Within 50-60 km			Within 60-70 km			Within 70-80 km			Within 80-90 km			Within 90-100 km			
	Name of nuclear power plant	Population	People	Name of nuclear power plant	Population	People	Name of nuclear power plant	Population	People	Name of nuclear power plant	Population	People	Name of nuclear power plant	Population	People	Name of nuclear power plant	Population	People	
1	Shima (Fukushima)	1,024,474	1,678,144	Hamanasu (Hokkaido)	1,678,144	Takatsu (Shimane)	1,274,717	Myama (Mie)	1,304,174	Tanagawa (Yamaguchi)	3,688,585	Ashihama (Mie)	3,688,585	Ashihama (Mie)	3,688,585	Ashihama (Mie)	3,688,585	Ashihama (Mie)	3,688,585
2	Kakuzushima (Okyama)	1,011,392	1,259,278	Chikazaki (Saga)	1,259,278	Kakuzushima (Okyama)	1,259,278	Chikazaki (Saga)	1,259,278	Tanagawa (Yamaguchi)	3,688,585	Ashihama (Mie)	3,688,585	Ashihama (Mie)	3,688,585	Ashihama (Mie)	3,688,585	Ashihama (Mie)	3,688,585
3	Koganezumi (Fukushima)	938,367	1,259,278	Kakuzushima (Okyama)	1,259,278	Chikazaki (Saga)	1,259,278	Chikazaki (Saga)	1,259,278	Tanagawa (Yamaguchi)	3,688,585	Ashihama (Mie)	3,688,585	Ashihama (Mie)	3,688,585	Ashihama (Mie)	3,688,585	Ashihama (Mie)	3,688,585
4	Hohoku (Yamaguchi)	826,405	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360
5	Chikazaki (Saga)	759,282	888,918	Koganezumi (Fukushima)	938,367	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360	Shima (Fukushima)	1,006,360
6	Hidaka (Wakayama)	446,483	888,918	Hohoku (Yamaguchi)	826,405	Uchinoura (Kagoshima)	802,696	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367
7	Hagi, Sumi (Yamaguchi)	388,959	677,932	Maki (Niigata)	739,141	Uchinoura (Kagoshima)	802,696	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367
8	Anabusa (Kumamoto)	365,458	590,324	Myama (Mie)	724,745	Chikazaki (Saga)	752,282	Chikazaki (Saga)	752,282	Chikazaki (Saga)	752,282	Chikazaki (Saga)	752,282	Chikazaki (Saga)	752,282	Chikazaki (Saga)	752,282	Chikazaki (Saga)	752,282
9	Hamanasu (Hokkaido)	347,028	570,654	Hidaka (Wakayama)	570,654	Maki (Niigata)	666,483	Shima (Fukushima)	809,145	Shima (Fukushima)	809,145	Shima (Fukushima)	809,145	Shima (Fukushima)	809,145	Shima (Fukushima)	809,145	Shima (Fukushima)	809,145
10	Hirasa (Tokushima)	322,045	529,961	Takayama-Kanai (Oita)	529,961	Hamanasu (Hokkaido)	598,927	Takatsu (Shimane)	789,094	Chikazaki (Saga)	899,528	Hirasa (Tokushima)	899,528	Hirasa (Tokushima)	899,528	Hirasa (Tokushima)	899,528	Hirasa (Tokushima)	899,528
11	Shira (Amori)	289,410	473,866	Kanai (Oita)	473,866	Hidaka (Wakayama)	598,927	Takatsu (Shimane)	789,094	Hagi, Sumi (Yamaguchi)	830,431	Hidaka (Wakayama)	830,431	Hidaka (Wakayama)	830,431	Hidaka (Wakayama)	830,431	Hidaka (Wakayama)	830,431
12	Kobakawa (Kochi)	271,645	437,692	Kanai (Tokushima)	437,692	Ashihama (Mie)	527,314	Kushima (Miyazaki)	643,629	Tanagawa (Yamaguchi)	832,262	Kobakawa (Kochi)	832,262	Kobakawa (Kochi)	832,262	Kobakawa (Kochi)	832,262	Kobakawa (Kochi)	832,262
13	Kanai (Amori)	261,495	415,680	Kushima (Miyazaki)	415,680	Kushima (Miyazaki)	485,028	Tanohata (Iwate)	693,988	Kanai (Tokushima)	817,841	Kanai (Tokushima)	817,841	Kanai (Tokushima)	817,841	Kanai (Tokushima)	817,841	Kanai (Tokushima)	817,841
14	Ashihama (Mie)	243,852	412,146	Togi, Suzu (Ishikawa)	412,146	Kanai (Amori)	482,874	Kumano (Mie)	632,517	Kanai (Tokushima)	817,841	Kanai (Tokushima)	817,841	Kanai (Tokushima)	817,841	Kanai (Tokushima)	817,841	Kanai (Tokushima)	817,841
15	Togi, Suzu (Ishikawa)	225,846	331,627	Ashihama (Mie)	331,627	Kuratsune (Shimane)	60,455	Gamanosawa (Amori)	90,455	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367
16	Amari (Tokushima)	219,173	311,527	Hohoku (Yamaguchi)	446,027	Kuratsune (Shimane)	60,455	Gamanosawa (Amori)	90,455	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367	Koganezumi (Fukushima)	938,367
17	Amari (Tokushima)	209,766	273,239	Shiranu, Suzu (Ishikawa)	273,239	Shiranu, Suzu (Ishikawa)	441,962	Hirasa (Tokushima)	512,126	Hirasa (Tokushima)	626,619	Hirasa (Tokushima)	626,619	Hirasa (Tokushima)	626,619	Hirasa (Tokushima)	626,619	Hirasa (Tokushima)	626,619
18	Kushima (Miyazaki)	199,878	258,688	Anabusa (Kumamoto)	258,688	Tanagawa (Yamaguchi)	351,353	Noushi (Amori)	497,716	Hidaka (Wakayama)	580,312	Chikazaki (Saga)	580,312	Chikazaki (Saga)	580,312	Chikazaki (Saga)	580,312	Chikazaki (Saga)	580,312
19	Sadowara (Miyazaki)	174,492	256,990	Asahi (Amori)	256,990	Tanagawa (Yamaguchi)	351,353	Noushi (Amori)	497,716	Tsushima (Ehime)	656,659	Maki (Niigata)	656,659	Maki (Niigata)	656,659	Maki (Niigata)	656,659	Maki (Niigata)	656,659
20	Honami (Iwate)	173,609	250,444	Matsunae (Hokkaido)	250,444	Matsunae (Hokkaido)	337,152	Taro (Iwate)	479,943	Kusumi (Hyogo)	521,381	Tsushima (Ehime)	521,381	Tsushima (Ehime)	521,381	Tsushima (Ehime)	521,381	Tsushima (Ehime)	521,381
21	Kusumi (Hyogo)	141,764	245,847	Shimokita (Amori)	245,847	Saga (Kochi)	314,570	Kanai (Tokushima)	488,105	Kuratsune (Shimane)	505,618	Saga (Kochi)	505,618	Saga (Kochi)	505,618	Saga (Kochi)	505,618	Saga (Kochi)	505,618
22	Kanai (Oita)	141,764	208,051	Kobakawa (Kochi)	208,051	Kanai (Amori)	208,051	Kanai (Amori)	208,051	Takatsu (Shimane)	451,421	Takatsu (Shimane)	451,421	Takatsu (Shimane)	451,421	Takatsu (Shimane)	451,421	Takatsu (Shimane)	451,421
23	Maki (Niigata)	136,982	203,254	Kuratsune (Shimane)	203,254	Kanai (Tokushima)	274,140	Tsushima (Ehime)	438,804	Hamanasu (Hokkaido)	446,446	Nachi-Katsura (Wakayama)	446,446	Nachi-Katsura (Wakayama)	446,446	Nachi-Katsura (Wakayama)	446,446	Nachi-Katsura (Wakayama)	446,446
24	Kumamoto (Shimane)	135,533	202,665	Hagi, Sumi (Yamaguchi)	202,665	Hagi, Sumi (Yamaguchi)	289,004	Shiranu, Suzu (Ishikawa)	289,004	Hamanasu (Hokkaido)	446,446	Kanai (Tokushima)	446,446	Kanai (Tokushima)	446,446	Kanai (Tokushima)	446,446	Kanai (Tokushima)	446,446
25	Asahi (Amori)	131,588	201,937	Asahi (Amori)	201,937	Asahi (Amori)	246,855	Maki (Niigata)	347,443	Aoya (Tottori)	388,692	Aoya (Tottori)	388,692	Aoya (Tottori)	388,692	Aoya (Tottori)	388,692	Aoya (Tottori)	388,692
26	Takayama-Kanai (Oita)	102,968	167,889	Uchinoura (Kagoshima)	167,889	Aoya (Tottori)	231,500	Kobakawa (Kochi)	335,848	Saga (Kochi)	335,914	Uchinoura (Kagoshima)	335,914	Uchinoura (Kagoshima)	335,914	Uchinoura (Kagoshima)	335,914	Uchinoura (Kagoshima)	335,914
27	Kanai (Tokushima)	95,895	162,716	Kumamoto (Shimane)	162,716	Kumamoto (Shimane)	231,500	Tsushima (Ehime)	332,743	Shira (Amori)	335,522	Kuratsune (Shimane)	335,522	Kuratsune (Shimane)	335,522	Kuratsune (Shimane)	335,522	Kuratsune (Shimane)	335,522
28	Tsushima (Ehime)	93,539	148,797	Hamanasu (Hyogo)	148,797	Tsushima (Ehime)	219,868	Hamanasu (Hyogo)	311,761	Hidaka (Wakayama)	335,141	Tanagawa (Yamaguchi)	335,141	Tanagawa (Yamaguchi)	335,141	Tanagawa (Yamaguchi)	335,141	Tanagawa (Yamaguchi)	335,141
29	Myama (Mie)	82,487	144,988	Tsushima (Ehime)	144,988	Tsushima (Ehime)	196,718	Kusumi (Hyogo)	298,753	Honami (Iwate)	332,214	Shiranu, Suzu (Ishikawa)	332,214	Shiranu, Suzu (Ishikawa)	332,214	Shiranu, Suzu (Ishikawa)	332,214	Shiranu, Suzu (Ishikawa)	332,214
30	Shiranu, Suzu (Ishikawa)	74,363	142,262	Hirasa (Tokushima)	185,754	Shimokita (Amori)	287,692	Matsunae (Hokkaido)	290,475	Matsunae (Hokkaido)	330,489	Sadowara (Miyazaki)	330,489	Sadowara (Miyazaki)	330,489	Sadowara (Miyazaki)	330,489	Sadowara (Miyazaki)	330,489
31	Uchinoura (Kagoshima)	69,859	140,072	Kumano (Mie)	183,650	Anabusa (Kumamoto)	299,300	Tsushima (Ehime)	299,300	Tsushima (Ehime)	299,300	Tsushima (Ehime)	299,300	Tsushima (Ehime)	299,300	Tsushima (Ehime)	299,300	Tsushima (Ehime)	299,300
32	Aoya (Tottori)	68,489	132,292	Kanai (Amori)	132,292	Takayama-Kanai (Oita)	246,154	Takayama-Kanai (Oita)	246,154	Shiranu, Suzu (Ishikawa)	292,730	Shiranu, Suzu (Ishikawa)	292,730	Shiranu, Suzu (Ishikawa)	292,730	Shiranu, Suzu (Ishikawa)	292,730	Shiranu, Suzu (Ishikawa)	292,730
33	Kuratsune (Shimane)	62,416	128,524	Hanabusa (Hyogo)	128,524	Kanai (Oita)	169,111	Togi, Suzu (Ishikawa)	228,803	Kanai (Oita)	198,058	Noushi (Amori)	198,058	Noushi (Amori)	198,058	Noushi (Amori)	198,058	Noushi (Amori)	198,058
34	Shimokita (Amori)	62,267	122,968	Tanagawa (Yamaguchi)	122,968	Sadowara (Miyazaki)	165,617	Aoya (Tottori)	231,786	Taro (Iwate)	194,868	Tsushima (Ehime)	194,868	Tsushima (Ehime)	194,868	Tsushima (Ehime)	194,868	Tsushima (Ehime)	194,868
35	Tsushima (Ehime)	60,833	121,295	Hirasa (Tokushima)	121,295	Kobakawa (Kochi)	164,268	Saga (Kochi)	230,411	Gamanosawa (Amori)	189,965	Gamanosawa (Amori)	189,965	Gamanosawa (Amori)	189,965	Gamanosawa (Amori)	189,965	Gamanosawa (Amori)	189,965
36	Takatsu (Shimane)	60,618	118,719	Honami (Iwate)	182,456	Kumamoto (Shimane)	162,456	Kumamoto (Shimane)	219,051	Maki (Niigata)	182,867	Kanai (Oita)	182,867	Kanai (Oita)	182,867	Kanai (Oita)	182,867	Kanai (Oita)	182,867
37	Hamanasu (Hokkaido)	59,534	103,308	Hidaka (Wakayama)	103,308	Noushi (Amori)	131,594	Sadowara (Miyazaki)	244,489	Takayama-Kanai (Oita)	176,043	Shira (Amori)	176,043	Shira (Amori)	176,043	Shira (Amori)	176,043	Shira (Amori)	176,043
38	Saga (Kochi)	58,909	91,269	Kusumi (Hyogo)	91,269	Takayama-Kanai (Oita)	137,057	Kanai (Amori)	292,004	Kushima (Miyazaki)	170,363	Takayama-Kanai (Oita)	170,363	Takayama-Kanai (Oita)	170,363	Takayama-Kanai (Oita)	170,363	Takayama-Kanai (Oita)	170,363
39	Hidaka (Wakayama)	56,452	89,269	Koza (Wakayama)	89,269	Tanohata (Iwate)	117,944	Kanai (Amori)	200,880	Uchinoura (Kagoshima)	168,923	Matsunae (Hokkaido)	168,923	Matsunae (Hokkaido)	168,923	Matsunae (Hokkaido)	168,923	Matsunae (Hokkaido)	168,923
40	Koza (Wakayama)	53,865	72,428	Nachi-Katsura (Wakayama)	72,428	Hidaka (Wakayama)	116,749	Uchinoura (Kagoshima)	198,185	Nachi-Katsura (Wakayama)	161,165	Tanohata (Iwate)	161,165	Tanohata (Iwate)	161,165	Tanohata (Iwate)	161,165	Tanohata (Iwate)	161,165
41	Nachi-Katsura (Wakayama)	52,954	70,969	Maki (Niigata)	100,979	Asahi (Amori)	100,979	Asahi (Amori)	158,855	Noushi (Amori)	157,565	Shimokita (Amori)	157,565	Shimokita (Amori)	157,565	Shimokita (Amori)	157,565	Shimokita (Amori)	157,565
42	Tsushima (Ehime)	48,582	68,686	Gamanosawa (Amori)	68,686	Matsunae (Hokkaido)	97,987	Matsunae (Hokkaido)	152,982	Asahi (Amori)	144,551	Tsushima (Ehime)	144,551	Tsushima (Ehime)	144,551	Tsushima (Ehime)	144,551	Tsushima (Ehime)	144,551
43	Taro (Iwate)	23,135	62,878	Tsushima (Ehime)	62,878	Tsushima (Ehime)	88,401	Hamanasu (Hokkaido)	145,813	Shimokita (Amori)	136,384	Kobakawa (Kochi)	136,384	Kobakawa (Kochi)	136,384	Kobakawa (Kochi)	136,384	Kobakawa (Kochi)	136,384
44	Tanohata (Iwate)	22,874	40,387	Matsunae (Hokkaido)	40,387	Kumano (Mie)	69,940	Honami (Iwate)	127,186	Sadowara (Miyazaki)	136,216	Kiyahama (Hokkaido)	136,216	Kiyahama (Hokkaido)	136,216	Kiyahama (Hokkaido)	136,216	Kiyahama (Hokkaido)	136,216
45	Tsushima (Ehime)	15,034	37,039	Kumano (Mie)	37,039	Taro (Iwate)	44,551	Maki (Niigata)	129,133	Tanohata (Iwate)	130,516	Kushima (Miyazaki)	130,516	Kushima (Miyazaki)	130,516	Kushima (Miyazaki)	130,516	Kushima (Miyazaki)	130,516
46	Kiyahama (Hokkaido)	13,429	33,339	Gamanosawa (Amori)	33,3														

Figure 11: Population by distance from planned nuclear power plant sites (2010)

Rank	Within a 3km radius			Within 3-5 km			Within 5-10km			Within 10-20 km			Within 20-30 km			Within 30-40km		
	Name of nuclear power plant population	People	Name of nuclear power plant population	People	Name of nuclear power plant population	People	Name of nuclear power plant population	People	Name of nuclear power plant population	People	Name of nuclear power plant population	People	Name of nuclear power plant population	People	Name of nuclear power plant population	People		
1	Takatsuki (Shimane)	12,659	Koganezumi (Fukushima)	28,594	Shima (Fukushima)	98,917	Koganezumi (Fukushima)	95,574	Shima (Fukushima)	131,614	Kakuzushima (Okyama)	919,453						
2	Sadowara (Miyazaki)	11,236	Sadowara (Miyazaki)	20,900	Sadowara (Miyazaki)	55,462	Sadowara (Miyazaki)	470,420	Koganezumi (Fukushima)	1,303,887	Koganezumi (Fukushima)	869,976						
3	Koganezumi (Fukushima)	9,454	Asanai (Aichi)	20,434	Tsurokawa (Yamaguchi)	28,471	Sadowara (Miyazaki)	260,199	Maki (Niigata)	690,927	Shima (Fukushima)	703,888						
4	Kanburi (Amori)	7,095	Takatsuki (Shimane)	17,798	Maki (Niigata)	32,229	Maki (Niigata)	32,229	Maki (Niigata)	32,229	Kakuzushima (Okyama)	507,918						
5	Kasumi (Hyogo)	6,855	Tsurokawa (Yamaguchi)	9,941	Kakuzushima (Okyama)	46,455	Tsurokawa (Yamaguchi)	46,455	Tsurokawa (Yamaguchi)	46,455	Hidaka (Wakayama)	502,511						
6	Hamasaka (Hyogo)	5,716	Maki (Niigata)	9,636	Sadowara (Miyazaki)	46,298	Kanburi (Amori)	46,298	Kanburi (Amori)	46,298	Hidaka (Wakayama)	502,511						
7	Tsurokawa (Yamaguchi)	4,085	Kakuzushima (Okyama)	6,926	Hagi Sanri (Yamaguchi)	36,484	Aoya (Tottori)	120,725	Ayan (Tokushima)	154,344	Ayan (Tokushima)	307,699						
8	Kanai (Tokushima)	3,480	Shimokita (Amori)	5,855	Hidaka (Wakayama)	34,121	Kakuzushima (Okyama)	114,857	Hagi Sanri (Yamaguchi)	148,627	Hidoku (Yamaguchi)	269,971						
9	Kamae (Oita)	3,161	Hagi Sanri (Yamaguchi)	5,782	Asanai (Aichi)	29,269	Kunihama (Kyoto)	89,727	Chikazaki (Sage)	247,394	Kanburi (Amori)	247,394						
10	Aoya (Tottori)	3,034	Kumano (Mie)	5,632	Maki (Niigata)	26,517	Hidaka (Wakayama)	89,452	Uchinoura (Kagoshima)	115,269	Asahikawa (Mie)	221,073						
11	Takayama-Kamae (Oita)	2,919	Shima (Fukushima)	5,375	Honami (Iwate)	25,539	Chikazaki (Sage)	89,452	Sadowara (Miyazaki)	105,954	Hwasaka (Tokushima)	183,813						
12	Kuramae (Mie)	2,843	Aoya (Tottori)	5,348	Kanburi (Amori)	23,890	Hidaka (Wakayama)	76,549	Kushima (Miyazaki)	94,021	Hwasaka (Tokushima)	183,813						
13	Shimomaru (Ishikawa)	2,796	Kanai (Tokushima)	4,633	Chikazaki (Sage)	18,377	Ayan (Tokushima)	76,074	Kanburi (Amori)	91,873	Kasumi (Hyogo)	173,987						
14	Asanai (Aichi)	2,661	Honami (Iwate)	4,322	Ayan (Tokushima)	17,265	Maki (Niigata)	72,755	Togi Suzu (Ishikawa)	91,405	Takayama-Kamae (Oita)	161,296						
15	Maki (Niigata)	2,522	Shimomaru (Ishikawa)	4,121	Nachi-Katsura (Wakayama)	14,936	Kamae (Oita)	59,538	Kasumi (Hyogo)	87,943	Honami (Iwate)	146,682						
16	Shima (Fukushima)	2,334	Kanburi (Amori)	4,076	Aoya (Tottori)	13,996	Takayama-Kamae (Oita)	54,734	Kunihama (Kyoto)	85,515	Kushima (Miyazaki)	138,648						
17	Hwasaka (Tokushima)	2,315	Kunihama (Kyoto)	4,045	Kunihama (Kyoto)	13,990	Noushi (Amori)	53,869	Hidaka (Wakayama)	84,137	Hamasaka (Hyogo)	114,562						
18	Chikazaki (Sage)	2,262	Togi Suzu (Ishikawa)	3,908	Myama (Mie)	13,578	Gamanosawa (Amori)	51,201	Hwasaka (Tokushima)	82,711	Hagi Sanri (Yamaguchi)	111,269						
19	Sega (Kochi)	2,249	Myama (Mie)	3,870	Takatsuki (Shimane)	13,455	Taro (Iwate)	47,780	Kurumatsu (Shimane)	92,798	Shima (Amori)	99,518						
20	Kiyahama (Hokkaido)	2,018	Nachi-Katsura (Wakayama)	3,776	Asahikawa (Mie)	12,396	Tsushima (Ehime)	45,712	Tsushima (Ehime)	68,776	Kobokawa (Kochi)	98,664						
21	Kurumatsu (Shimane)	1,850	Kiyahama (Hokkaido)	3,723	Hidaka (Wakayama)	12,164	Shimokita (Ehime)	45,391	Honoku (Yamaguchi)	67,253	Uchinoura (Kagoshima)	92,454						
22	Honami (Iwate)	1,756	Maki (Niigata)	3,461	Koza (Wakayama)	12,059	Tamagawa (Yamaguchi)	45,391	Anakusa (Kumamoto)	65,720	Togi Suzu (Ishikawa)	86,731						
23	Asahikawa (Mie)	1,679	Chikazaki (Sage)	3,349	Kumano (Mie)	11,622	Sega (Kochi)	42,593	Kumano (Mie)	60,400	Kunihama (Kyoto)	86,731						
24	Togi Suzu (Ishikawa)	1,564	Kasumi (Hyogo)	2,586	Hamasaka (Hyogo)	11,388	Togi Suzu (Ishikawa)	40,828	Asanai (Aichi)	59,200	Asanai (Aichi)	82,476						
25	Honoku (Yamaguchi)	1,561	Hamasaka (Hyogo)	2,555	Kushima (Miyazaki)	9,560	Nachi-Katsura (Wakayama)	38,308	Asahikawa (Mie)	37,898	Maki (Niigata)	73,002						
26	Myama (Mie)	1,498	Hidaka (Wakayama)	2,353	Hagi Sanri (Yamaguchi)	8,230	Togi Suzu (Ishikawa)	37,785	Kobokawa (Kochi)	39,269	Anakusa (Kumamoto)	65,884						
27	Koza (Wakayama)	1,438	Kurumatsu (Shimane)	2,358	Kobokawa (Kochi)	8,044	Koza (Wakayama)	34,587	Wakkanai (Hokkaido)	38,335	Tsushima (Ehime)	64,762						
28	Hagi Sanri (Yamaguchi)	1,374	Taro (Iwate)	2,160	Gamanosawa (Amori)	7,930	Kurumatsu (Shimane)	32,366	Koza (Wakayama)	37,155	Tanohata (Iwate)	62,987						
29	Nachi-Katsura (Wakayama)	1,335	Shimomaru (Ishikawa)	2,122	Shimomaru (Ishikawa)	7,821	Kasumi (Hyogo)	31,853	Tsurokawa (Yamaguchi)	37,022	Tamagawa (Yamaguchi)	54,323						
30	Hidaka (Wakayama)	1,295	Takayama-Kamae (Oita)	2,084	Kurumatsu (Shimane)	7,628	Kushima (Miyazaki)	31,283	Maki (Niigata)	34,998	Takatsuki (Shimane)	52,498						
31	Kakuzushima (Okyama)	1,177	Kobokawa (Kochi)	1,967	Matsumae (Hokkaido)	6,990	Asanai (Aichi)	28,101	Kamae (Oita)	34,170	Sega (Kochi)	46,850						
32	Tanohata (Iwate)	1,039	Tsushima (Ehime)	1,911	Honoku (Yamaguchi)	6,613	Hamasaka (Hyogo)	26,402	Shiura (Amori)	32,466	Aoya (Tottori)	44,465						
33	Taro (Iwate)	970	Hwasaka (Tokushima)	1,770	Tsushima (Ehime)	6,242	Honoku (Yamaguchi)	26,210	Tanohata (Iwate)	32,215	Kanai (Tokushima)	43,580						
34	Tsushima (Ehime)	911	Hidaka (Wakayama)	1,703	Tamagawa (Yamaguchi)	5,742	Hwasaka (Tokushima)	24,332	Takayama-Kamae (Oita)	30,401	Myama (Mie)	42,018						
35	Kunihama (Kyoto)	896	Tamagawa (Yamaguchi)	1,694	Sega (Kochi)	5,210	Myama (Mie)	23,621	Nachi-Katsura (Wakayama)	29,465	Shimomaru (Ishikawa)	38,362						
36	Anakusa (Kumamoto)	863	Tanohata (Iwate)	1,529	Kamae (Oita)	4,601	Anakusa (Kumamoto)	23,424	Hidaka (Wakayama)	26,515	Kurumatsu (Shimane)	37,116						
37	Hidaka (Wakayama)	840	Asanai (Mie)	1,528	Hwasaka (Tokushima)	4,037	Kumano (Mie)	23,341	Honami (Iwate)	24,169	Hidaka (Wakayama)	36,799						
38	Noushi (Amori)	833	Sega (Kochi)	1,266	Taro (Iwate)	3,901	Shimomaru (Ishikawa)	21,274	Takatsuki (Shimane)	23,902	Hamasaka (Hokkaido)	33,472						
39	Shimokita (Amori)	788	Honoku (Yamaguchi)	1,158	Kanai (Tokushima)	3,845	Shiura (Amori)	19,515	Tamagawa (Yamaguchi)	23,598	Kumano (Mie)	32,362						
40	Hamasaka (Hokkaido)	774	Gamanosawa (Amori)	1,140	Anakusa (Kumamoto)	3,787	Uchinoura (Kagoshima)	19,194	19,194	19,194	Nachi-Katsura (Wakayama)	26,124						
41	Ayan (Tokushima)	762	Matsumae (Hokkaido)	935	Shiura (Amori)	3,570	Asahikawa (Mie)	18,673	Taro (Iwate)	19,665	Koza (Wakayama)	24,043						
42	Maki (Niigata)	649	Kamae (Oita)	857	Takayama-Kamae (Oita)	3,259	Honami (Iwate)	18,471	Shimokita (Amori)	19,463	Sadowara (Miyazaki)	22,862						
43	Shiura (Amori)	577	Koza (Wakayama)	712	Kasumi (Hyogo)	3,242	Takatsuki (Shimane)	18,255	Myama (Mie)	17,441	Tsurokawa (Yamaguchi)	22,869						
44	Matsumae (Hokkaido)	509	Asahikawa (Mie)	628	Shimokita (Amori)	2,822	Kobokawa (Kochi)	15,219	Kanai (Tokushima)	13,982	Taro (Iwate)	22,193						
45	Gamanosawa (Amori)	478	Kushima (Miyazaki)	638	Tanohata (Iwate)	2,814	Tanohata (Iwate)	11,716	Taisei (Hokkaido)	12,039	Kiyahama (Hokkaido)	15,087						
46	Tamagawa (Yamaguchi)	300	Noushi (Amori)	561	Noushi (Amori)	2,691	Kanai (Tokushima)	6,530	Torimaki (Hokkaido)	11,651	Matsumae (Hokkaido)	14,320						
47	Taisei (Hokkaido)	67	Wakkanai (Hokkaido)	450	Kiyahama (Hokkaido)	1,719	Kiyahama (Hokkaido)	6,195	Shimomaru (Ishikawa)	10,994	Shimokita (Amori)	14,051						
48	Kobokawa (Kochi)	66	Ayan (Tokushima)	444	Taisei (Hokkaido)	1,284	Taisei (Hokkaido)	5,047	Shimomaru (Ishikawa)	10,760	Gamanosawa (Amori)	10,297						
49	Kushima (Miyazaki)	64	Taisei (Hokkaido)	417	Uchinoura (Kagoshima)	1,000	Matsumae (Hokkaido)	3,800	Gamanosawa (Amori)	9,910	Noushi (Amori)	10,140						
50	Uchinoura (Kagoshima)	59	Hamasaka (Hyogo)	385	Wakkanai (Hokkaido)	660	Torimaki (Hokkaido)	2,022	Matsumae (Hokkaido)	6,776	Torimaki (Hokkaido)	8,341						
51	Torimaki (Hokkaido)	40	Uchinoura (Kagoshima)	10	Hamasaka (Hyogo)	445	Torimaki (Hokkaido)	1,374	Kiyahama (Hokkaido)	5,467	Taisei (Hokkaido)	5,467						
52	Wakkanai (Hokkaido)	3	Uchinoura (Kagoshima)	4	Torimaki (Hokkaido)	147	Hamasaka (Hyogo)	948	Hamasaka (Hokkaido)	1,116	Wakkanai (Hokkaido)	1,296						
	Fukushima-Daichi (Fukushima)	2,780	Fukushima-Daichi (Fukushima)	10,471	Fukushima-Daichi (Fukushima)	33,176	Fukushima-Daichi (Fukushima)	30,271	Fukushima-Daichi (Fukushima)	61,340	Fukushima-Daichi (Fukushima)	91,626						

Figure 11: (continued)

Rank	Within 0-50 km	Within 50-60 km	Within 60-70 km	Within 70-80 km	Within 80-90 km	Within 90-100 km
Name of nuclear power plant population	Name of nuclear power plant population	Name of nuclear power plant population	Name of nuclear power plant population	Name of nuclear power plant population	Name of nuclear power plant population	Name of nuclear power plant population
1	Kakuzhima (Oeyama)	Hamanasu (Hokkaido)	Kakuzhima (Oeyama)	Myama (Mie)	Myama (Mie)	Ashihama (Mie)
2	Shima (Fukushima)	Chikazaki (Saga)	Chikazaki (Saga)	Kakuzhima (Oeyama)	1,313.034	1,313.034
3	Kogemaru (Fukushima)	Kakuzhima (Oeyama)	Chikazaki (Saga)	Hidaka (Wakayama)	1,282.944	1,282.944
4	Hohoku (Yamaguchi)	Shima (Fukushima)	Togi Suzu (Ishikawa)	Tanagawa (Yamaguchi)	1,231.634	1,231.634
5	Chikazaki (Saga)	Kogemaru (Fukushima)	Shima (Fukushima)	Ashihama (Mie)	1,153.449	1,153.449
6	Hidaka (Wakayama)	Hohoku (Yamaguchi)	Kogemaru (Fukushima)	Kogemaru (Fukushima)	1,072.238	1,072.238
7	Hagi Sumi (Yamaguchi)	Maki (Niigata)	Uchinoura (Kagoshima)	Kogemaru (Fukushima)	929.995	929.995
8	Anabusa (Kumamoto)	Myama (Mie)	Myama (Mie)	Anabusa (Kumamoto)	990.858	990.858
9	Hamanasu (Hokkaido)	Hidaka (Wakayama)	Hidaka (Wakayama)	Hidaka (Wakayama)	985.958	985.958
10	Hirasa (Tokushima)	Takayama-Kanai (Oita)	Hamanasu (Hokkaido)	Chikazaki (Saga)	904.925	904.925
11	Shira (Amori)	Kanai (Oita)	Hidaka (Wakayama)	Hagi Sumi (Yamaguchi)	883.103	883.103
12	Kobukawa (Kochi)	Kanai (Oita)	Ashihama (Mie)	Tanagawa (Yamaguchi)	856.128	856.128
13	Kanai (Amori)	Anabusa (Kumamoto)	Anabusa (Kumamoto)	Kanai (Tobushima)	851.941	851.941
14	Ashihama (Mie)	Togi Suzu (Ishikawa)	Kushima (Miyazaki)	Tanohata (Iwate)	699.576	699.576
15	Anan (Tobushima)	Ashihama (Mie)	Shimomura (Suzo (Ishikawa)	Gamaosawa (Amori)	690.949	690.949
16	Togi Suzu (Ishikawa)	Hagi Sumi (Yamaguchi)	Kogemaru (Fukushima)	Hamanasu (Hokkaido)	670.877	670.877
17	Maki (Niigata)	Anan (Tobushima)	Anan (Tobushima)	Kakuzhima (Sago)	658.886	658.886
18	Kushima (Miyazaki)	Shima (Fukushima)	Anabusa (Kumamoto)	Shima (Fukushima)	626.885	626.885
19	Honami (Iwate)	Asanai (Akita)	Matsunae (Hokkaido)	Tsushima (Ehime)	585.917	585.917
20	Sadowara (Miyazaki)	Sadowara (Miyazaki)	Tsushima (Ehime)	Kanai (Tobushima)	559.708	559.708
21	Maki (Niigata)	Shimokita (Amori)	Kanai (Tobushima)	Kanai (Tobushima)	521.483	521.483
22	Kanai (Hongo)	Kobukawa (Kochi)	Kanai (Tobushima)	Takatsu (Shimane)	489.385	489.385
23	Kanai (Oita)	Ayaya (Tottori)	Kanai (Tobushima)	Kanai (Tobushima)	467.559	467.559
24	Kanai (Oita)	Kushima (Miyazaki)	Hagi Sumi (Yamaguchi)	Hamanasu (Hokkaido)	456.040	456.040
25	Asanai (Akita)	Kurumatsu (Shimane)	Asanai (Akita)	Ayaya (Tottori)	415.108	415.108
26	Takayama-Kanai (Oita)	Uchinoura (Kagoshima)	Uchinoura (Kagoshima)	Shima (Fukushima)	376.532	376.532
27	Tsushima (Ehime)	Kanai (Tobushima)	Kanai (Tobushima)	Hidaka (Wakayama)	369.476	369.476
28	Kanai (Tobushima)	Tsushima (Ehime)	Tsushima (Ehime)	Matsunae (Hokkaido)	369.443	369.443
29	Myama (Mie)	Shimomura (Suzo (Ishikawa)	Hamanasu (Hokkaido)	Saga (Kochi)	351.644	351.644
30	Shimomura (Suzo (Ishikawa)	Maki (Niigata)	Kanai (Tobushima)	Honami (Iwate)	341.545	341.545
31	Uchinoura (Kagoshima)	Saga (Kochi)	Hirasa (Tokushima)	Shimomura (Suzo (Ishikawa)	258.736	258.736
32	Ayaya (Tottori)	Kanai (Tobushima)	Kanai (Tobushima)	Shimomura (Suzo (Ishikawa)	238.917	238.917
33	Shimokita (Amori)	Kanai (Tobushima)	Kanai (Tobushima)	Kanai (Tobushima)	229.678	229.678
34	Takatsu (Shimane)	Hirasa (Tokushima)	Kobukawa (Kochi)	Togi Suzu (Ishikawa)	221.524	221.524
35	Tsushima (Yamaguchi)	Takatsu (Shimane)	Takatsu (Shimane)	Gamaosawa (Amori)	216.938	216.938
36	Saga (Kochi)	Takatsu (Shimane)	Honami (Iwate)	Takayama-Kanai (Oita)	206.949	206.949
37	Hamanasu (Hongo)	Hidaka (Wakayama)	Noshi (Amori)	Kanai (Oita)	204.037	204.037
38	Kurumatsu (Shimane)	Kanai (Hongo)	Kanai (Hongo)	Kushima (Miyazaki)	192.078	192.078
39	Hidaka (Wakayama)	Kanai (Hongo)	Kanai (Hongo)	Nachi-Katsura (Wakayama)	184.045	184.045
40	Koza (Wakayama)	Shima (Fukushima)	Shima (Fukushima)	Uchinoura (Kagoshima)	184.040	184.040
41	Nachi-Katsura (Wakayama)	Nachi-Katsura (Wakayama)	Nachi-Katsura (Wakayama)	Noshi (Amori)	178.731	178.731
42	Tanagawa (Yamaguchi)	Honami (Iwate)	Matsunae (Hokkaido)	Asanai (Akita)	163.000	163.000
43	Tanohata (Iwate)	Togi Suzu (Ishikawa)	Shimokita (Ehime)	Sadowara (Miyazaki)	154.024	154.024
44	Tanohata (Iwate)	Matsunae (Hokkaido)	Shimokita (Ehime)	Kushima (Miyazaki)	150.397	150.397
45	Takatsu (Shimane)	Kanai (Tobushima)	Kanai (Tobushima)	Tanohata (Iwate)	131.699	131.699
46	Kanai (Hongo)	Kanai (Hongo)	Kanai (Hongo)	Togi Suzu (Ishikawa)	119.221	119.221
47	Gamaosawa (Amori)	Tanohata (Iwate)	Tanohata (Iwate)	Tanohata (Iwate)	97.006	97.006
48	Matsunae (Hokkaido)	Tanohata (Iwate)	Tanohata (Iwate)	Tanohata (Iwate)	87.439	87.439
49	Kanai (Mie)	Kanai (Mie)	Kanai (Mie)	Kanai (Mie)	87.439	87.439
50	Noshi (Amori)	Noshi (Amori)	Noshi (Amori)	Noshi (Amori)	87.439	87.439
51	Tanohata (Iwate)	Tanohata (Iwate)	Tanohata (Iwate)	Tanohata (Iwate)	87.439	87.439
52	Wakana (Hokkaido)	Wakana (Hokkaido)	Wakana (Hokkaido)	Wakana (Hokkaido)	6.044	6.044
-	Fukushima-Daichi (Fukushima)	Fukushima-Daichi (Fukushima)	Fukushima-Daichi (Fukushima)	Fukushima-Daichi (Fukushima)	382.371	382.371
-	Fukushima-Daichi (Fukushima)	Fukushima-Daichi (Fukushima)	Fukushima-Daichi (Fukushima)	Fukushima-Daichi (Fukushima)	1,243.349	1,243.349

Source: Same as Figures 1, 2, and 3.

Figure 12: (continued)

Rank	Within 0-50 km		Within 50-60 km		Within 60-70 km		Within 70-80 km		Within 80-90 km		Within 90-100 km	
	Name of nuclear power plant	Population	Name of nuclear power plant	Population	Name of nuclear power plant	Population	Name of nuclear power plant	Population	Name of nuclear power plant	Population	Name of nuclear power plant	Population
1	Shima (Fukushima)	1,026,474	Hamamatsu (Hokkaido)	1,678,144	Takatsuki (Shimane)	1,274,717	Myama (Mie)	1,304,174	Hagi, Sumi (Yamaguchi)	830,831	Hidaka (Wakayama)	1,104,881
2	Kakuzushima (Okiyama)	1,011,392	Chikazaki (Saga)	1,259,278	Kakuzushima (Okiyama)	1,253,588	Tanagawa (Yamaguchi)	1,238,806	Myama (Mie)	3,355,242	Ashihama (Mie)	6,499,371
3	Koganezumi (Fukushima)	938,367	Kakuzushima (Okiyama)	1,259,278	Chikazaki (Saga)	1,253,588	Kakuzushima (Okiyama)	1,227,911	Ashihama (Mie)	3,355,242	Ashihama (Mie)	5,134,703
4	Hohoku (Yamaguchi)	826,405	Shima (Fukushima)	1,006,360	Togi Suza (Ishikawa)	916,485	Hidaka (Wakayama)	1,199,121	Kumano (Mie)	1,841,645	Kumano (Mie)	3,958,219
5	Chikazaki (Saga)	752,282	Koganezumi (Fukushima)	938,367	Shima (Fukushima)	817,017	Ashihama (Mie)	1,109,110	Kakuzushima (Okiyama)	1,402,720	Kakuzushima (Okiyama)	2,958,013
6	Hidaka (Wakayama)	446,683	Hohoku (Yamaguchi)	739,141	Uchinoura (Kagoshima)	802,696	Koganezumi (Shimane)	1,099,157	Maki (Niigata)	1,060,579	Hohoku (Yamaguchi)	1,659,762
7	Hagi, Sumi (Yamaguchi)	388,959	Maki (Niigata)	677,932	Koganezumi (Fukushima)	727,986	Koganezumi (Shimane)	886,357	Hohoku (Yamaguchi)	984,200	Auan (Tobushima)	1,628,263
8	Anabusa (Kumamoto)	365,458	Myama (Mie)	590,324	Chikazaki (Saga)	724,745	Chikazaki (Saga)	859,145	Anabusa (Kumamoto)	958,728	Kumihama (Kyoto)	1,331,076
9	Hamamatsu (Hokkaido)	347,028	Hidaka (Wakayama)	570,654	Maki (Niigata)	666,483	Shima (Fukushima)	801,968	Himesa (Tobushima)	936,303	Anabusa (Kumamoto)	1,255,086
10	Himesa (Tobushima)	322,045	Takayama-Kamae (Oita)	529,961	Hamamatsu (Hokkaido)	595,927	Takatsuki (Shimane)	788,064	Chikazaki (Saga)	899,728	Aya (Tottori)	1,197,174
11	Shira (Amori)	289,410	Kamae (Oita)	473,866	Hidaka (Wakayama)	598,797	Hagi, Sumi (Yamaguchi)	731,067	Hagi, Sumi (Yamaguchi)	830,831	Hidaka (Wakayama)	1,104,881
12	Kobukawa (Kochi)	271,645	Kamae (Oita)	473,866	Ashihama (Mie)	527,314	Kushima (Myazaki)	643,629	Tanagawa (Yamaguchi)	823,262	Koganezumi (Fukushima)	867,413
13	Kamitaka (Amori)	261,495	Anabusa (Kumamoto)	415,680	Kushima (Myazaki)	485,028	Tanohata (Iwate)	650,988	Kanan (Tobushima)	817,841	Kusan (Hyogo)	814,796
14	Ashihama (Mie)	243,852	Togi Suza (Ishikawa)	412,146	Auan (Tobushima)	482,874	Kumano (Mie)	652,517	Koganezumi (Fukushima)	643,526	Himesa (Tobushima)	804,767
15	Togi Suza (Ishikawa)	225,846	Ashihama (Mie)	421,646	Gamanosawa (Amori)	590,451	Gamanosawa (Amori)	590,451	Koganezumi (Fukushima)	643,526	Hagi, Sumi (Yamaguchi)	777,759
16	Amari (Tobushima)	219,173	Hagi, Sumi (Yamaguchi)	321,627	Koganezumi (Shimane)	446,027	Gamanosawa (Amori)	590,451	Koganezumi (Fukushima)	643,526	Himesa (Tobushima)	804,767
17	Amari (Tobushima)	209,766	Auan (Tobushima)	279,239	Hohoku (Yamaguchi)	442,797	Kobukawa (Kochi)	520,338	Kobukawa (Kochi)	635,885	Hamasa (Hyogo)	626,019
18	Kushima (Myazaki)	199,878	Shura (Amori)	258,688	Shimomaru Suza (Ishikawa)	441,962	Himesa (Tobushima)	512,126	Hamasa (Hyogo)	626,019	Shima (Fukushima)	680,371
19	Sadowara (Myazaki)	176,492	Asami (Akita)	256,990	Anabusa (Kumamoto)	397,482	Hidaka (Wakayama)	487,776	Shima (Fukushima)	580,312	Chikazaki (Saga)	670,083
20	Honami (Iwate)	173,609	Sadowara (Myazaki)	250,447	Matsumae (Hokkaido)	337,152	Noushi (Amori)	489,756	Tsushima (Ehime)	566,359	Maki (Niigata)	632,371
21	Kusan (Hyogo)	141,983	Shimokita (Amori)	245,847	Taro (Iwate)	479,043	Kusan (Hyogo)	479,043	Kusan (Hyogo)	521,381	Tsushima (Ehime)	636,467
22	Kusan (Hyogo)	141,764	Kobukawa (Kochi)	208,851	Saga (Kochi)	341,570	Kanan (Tobushima)	448,105	Kuranatsu (Shimane)	505,038	Saga (Kochi)	518,138
23	Maki (Niigata)	135,982	Kuranatsu (Shimane)	203,264	Kanan (Tobushima)	208,004	Auan (Tobushima)	438,804	Takatsuki (Shimane)	451,021	Takatsuki (Shimane)	457,216
24	Kumihama (Kyoto)	135,533	Aya (Tottori)	202,655	Hagi, Sumi (Yamaguchi)	280,004	Shimomaru Suza (Ishikawa)	388,105	Hamamatsu (Hokkaido)	446,446	Nachi-Katsura (Wakayama)	456,707
25	Asami (Akita)	131,588	Kushima (Myazaki)	201,937	Asami (Akita)	246,855	Maki (Niigata)	347,443	Kusan (Hyogo)	388,062	Koza (Wakayama)	441,459
26	Takayama-Kamae (Oita)	102,968	Uchinoura (Kagoshima)	167,589	Aya (Tottori)	230,008	Tsushima (Ehime)	345,848	Shura (Amori)	335,914	Uchinoura (Kagoshima)	424,023
27	Kanan (Tobushima)	95,895	Kumihama (Kyoto)	162,776	Kumihama (Kyoto)	230,008	Tsushima (Ehime)	333,743	Shura (Amori)	335,914	Kuranatsu (Shimane)	443,768
28	Tsushima (Ehime)	93,539	Shimomaru Suza (Ishikawa)	148,797	Tsuroda (Yamaguchi)	219,868	Hamasa (Hyogo)	311,761	Hidaka (Wakayama)	335,141	Tanagawa (Yamaguchi)	420,977
29	Myama (Mie)	82,487	Tsushima (Ehime)	144,988	Hamasa (Hyogo)	196,718	Kusan (Hyogo)	298,753	Honami (Iwate)	332,214	Shimomaru Suza (Ishikawa)	408,825
30	Shimomaru Suza (Ishikawa)	74,363	Maki (Niigata)	142,262	Himesa (Tobushima)	185,754	Shimokita (Amori)	287,662	Matsumae (Hokkaido)	330,485	Sadowara (Myazaki)	401,563
31	Uchinoura (Kagoshima)	69,859	Saga (Kochi)	140,072	Kumano (Mie)	183,659	Anabusa (Kumamoto)	265,300	Tsuroda (Yamaguchi)	230,475	Taro (Iwate)	393,530
32	Aya (Tottori)	68,489	Kamitaka (Amori)	132,292	Kusan (Hyogo)	176,631	Takayama-Kamae (Oita)	246,134	Shimomaru Suza (Ishikawa)	227,720	Asami (Akita)	355,363
33	Kuranatsu (Shimane)	62,416	Hamasa (Hyogo)	128,524	Kanan (Oita)	169,111	Togi Suza (Ishikawa)	238,803	Kamae (Oita)	196,068	Noushi (Amori)	352,335
34	Shimokita (Amori)	62,267	Tanagawa (Yamaguchi)	129,968	Sadowara (Myazaki)	165,617	Aya (Tottori)	231,796	Taro (Iwate)	194,485	Taisei (Hokkaido)	320,411
35	Tsuroda (Yamaguchi)	60,833	Himesa (Tobushima)	121,295	Kobukawa (Kochi)	164,298	Saga (Kochi)	219,051	Gamanosawa (Amori)	189,895	Gamanosawa (Amori)	312,340
36	Takatsuki (Shimane)	60,618	Takatsuki (Shimane)	118,710	Honami (Iwate)	162,456	Kumihama (Kyoto)	211,859	Maki (Niigata)	182,467	Kamae (Oita)	294,001
37	Hamasa (Wakayama)	59,534	Hidaka (Wakayama)	103,308	Noushi (Amori)	131,594	Sadowara (Myazaki)	204,469	Takayama-Kamae (Oita)	176,043	Shura (Amori)	260,675
38	Saga (Kochi)	58,909	Kusan (Hyogo)	91,269	Takayama-Kamae (Oita)	137,057	Kamae (Oita)	202,004	Kushima (Myazaki)	170,533	Takayama-Kamae (Oita)	249,269
39	Hidaka (Wakayama)	56,452	Koza (Wakayama)	73,659	Tanohata (Iwate)	117,944	Kamitaka (Amori)	200,860	Uchinoura (Kagoshima)	168,823	Matsumae (Hokkaido)	242,429
40	Koza (Wakayama)	53,865	Nachi-Katsura (Wakayama)	72,428	Hidaka (Wakayama)	116,749	Uchinoura (Kagoshima)	198,185	Nachi-Katsura (Wakayama)	161,165	Tanohata (Iwate)	239,336
41	Nachi-Katsura (Wakayama)	52,954	Honami (Iwate)	70,969	Maki (Niigata)	100,979	Asami (Akita)	158,852	Noushi (Amori)	157,833	Shimokita (Amori)	231,764
42	Tanagawa (Yamaguchi)	48,582	Tsuroda (Yamaguchi)	68,686	Gamanosawa (Amori)	97,987	Matsumae (Hokkaido)	155,985	Asami (Akita)	144,451	Tsuroda (Yamaguchi)	224,192
43	Taro (Iwate)	22,874	Taro (Iwate)	62,878	Tsushima (Ehime)	88,401	Shimokita (Hokkaido)	136,216	Shimokita (Hokkaido)	136,216	Kobukawa (Kochi)	207,438
44	Tanohata (Iwate)	22,874	Matsumae (Hokkaido)	49,387	Shimokita (Hokkaido)	69,940	Honami (Iwate)	137,186	Sadowara (Myazaki)	136,216	Kubukawa (Kochi)	207,438
45	Taisei (Hokkaido)	15,034	Kumano (Mie)	37,039	Maki (Niigata)	44,551	Maki (Niigata)	129,133	Tanohata (Iwate)	130,361	Kushima (Myazaki)	153,718
46	Kubukawa (Kochi)	13,429	Gamanosawa (Amori)	33,339	Shura (Amori)	39,240	Shura (Amori)	76,547	Sadowara (Myazaki)	130,361	Kubukawa (Kochi)	207,438
47	Noushi (Amori)	12,221	Noushi (Amori)	29,503	Noushi (Amori)	29,503	Koza (Wakayama)	47,848	Togi Suza (Ishikawa)	103,516	Maki (Niigata)	131,295
48	Matsumae (Hokkaido)	11,958	Tanohata (Iwate)	27,265	Nachi-Katsura (Wakayama)	26,077	Nachi-Katsura (Wakayama)	47,848	Kubukawa (Kochi)	87,707	Hamamatsu (Hokkaido)	77,627
49	Gamanosawa (Amori)	11,625	Taisei (Hokkaido)	10,983	Koza (Wakayama)	25,265	Kubukawa (Kochi)	41,317	Taisei (Hokkaido)	76,582	Torimaki (Hokkaido)	77,269
50	Kumano (Mie)	11,349	Torimaki (Hokkaido)	14,613	Kubukawa (Kochi)	20,368	Torimaki (Hokkaido)	35,539	Kamitaka (Amori)	70,288	Togi Suza (Ishikawa)	75,465
51	Torimaki (Hokkaido)	7,611	Kubukawa (Kochi)	7,514	Taisei (Hokkaido)	14,317	Wakkanai (Hokkaido)	11,044	Torimaki (Hokkaido)	59,383	Kamitaka (Amori)	59,098
52	Wakkanai (Hokkaido)	4,291	Wakkanai (Hokkaido)	5,142	Wakkanai (Hokkaido)	7,100	Taisei (Hokkaido)	9,620	Wakkanai (Hokkaido)	4,721	Wakkanai (Hokkaido)	681
	Fukushima-Daichi (Fukushima)	283,651	Fukushima-Daichi (Fukushima)	563,205	Fukushima-Daichi (Fukushima)	675,818	Fukushima-Daichi (Fukushima)	294,956	Fukushima-Daichi (Fukushima)	378,213	Fukushima-Daichi (Fukushima)	1,244,685

Source: Same as Figures 1, 2, and 3.

In 2010, Fukushima Daiichi had a population of 1.24 million, ranking ninth, followed by Amakusa (Kumamoto) with 1.25 million, both above the median (Figures 10, 11, and 12).

5 Conclusion

5-1 Summary

In this study, the cumulative and zone-specific population were calculated and compared within concentric circular zones centered on the planned sites of nuclear power plants in 52 regions across Japan, based on the distance from the planned sites. For the distance from the nuclear power plants, the cumulative values were categorized into the PAZ (5 km radius), conventional disaster prevention zones (10 km radius), 2011 evacuation orders (20 km radius), UPZ/2011 indoor evacuation (30 km radius), Tani's map (within 50 km radius), U.S. Embassy guidelines (80 km radius), and CEZ/Chernobyl standard (100 km radius) were used to divide the areas into seven zones for analysis.

The population in each zone was categorized as follows: within the 10 km radius, into three zones (3 km radius, 3–5 km radius, and 5–10 km radius); and outside the 10 km radius, into zones every 10 km radius, up to the 100 km radius. Drawing lessons from the Fukushima nuclear accident, regional disaster prevention plans revised after 2011 by local governments where nuclear power plants are located designate areas within a 30 km radius of the plant as evacuation zones, while areas outside this radius are not designated as evacuation zones.

In regions where 52 nuclear power plants were planned but construction was canceled, the number of regions with an evacuation target population exceeding 1 million people increases beyond the 30 km radius. If the U.S. Embassy's 80 km radius is adopted, as of 2020, 31 regions exceed 1 million people. The "Regional Disaster Prevention Plan" designates evacuation zones within a 30 km radius, but if this standard is applied to areas where nuclear power plants were planned to be constructed, the most populous area, Koganemaru (Fukuoka), would include Fukuoka City within its boundaries, resulting in a population of 2.10 million. However, only five areas exceed 500,000, with the sixth highest being Aoya (Tottori) at 292,968, thereby keeping the population subject to evacuation below approximately 300,000.

5-2 Future research issues

This study estimated population figures based solely on the radial distance from planned nuclear power plant sites, without incorporating demographic attributes such as gender, age, or household structure. While this approach was useful for establishing a general population baseline, it inevitably overlooks important dimensions of social vulnerability and community characteristics. For instance, populations with a higher proportion of elderly residents or households with young children may face greater difficulties in evacuation and recovery during nuclear emergencies. Likewise, household numbers and densities can significantly influence the effectiveness of evacuation planning and the provision of social support.

Moreover, the present analysis was restricted to data for the years 2000, 2010, and 2020, meaning that intermediate fluctuations and longer-term trends could not be fully captured. Future research should incorporate census data from all available five-year intervals to produce a more fine-grained temporal analysis. This would allow for the identification of short-

term population movements, the detection of demographic turning points, and the assessment of recovery or decline processes in host communities.

Further studies could also integrate socio-economic variables such as employment structure, land use, and regional economic dependency on the nuclear industry. Combining demographic analysis with spatial planning indicators—such as evacuation routes, shelter capacity, and medical accessibility—would enable a more comprehensive assessment of community resilience and vulnerability. Finally, comparative studies between Japan and other countries with nuclear facilities, including those where construction projects were suspended, could highlight the universal as well as context-specific challenges of nuclear emergency preparedness.

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