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A framework for data & information exchange for seismic risk harmonization in the Greece- Türkiye Cross Border Area

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WP3: Joint Seismic Risk Assessment of School Buildings

T3.2: Joint assessment of seismic risk in the Greece- Türkiye CBA (school
buildings in the pilot sites)

DELIVERABLE COORDINATED BY:
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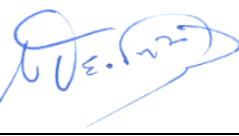
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1 BACKGROUND OF THE DOCUMENT

1.1 RELATED WORKPACKAGE AND TASKS

This document describes the activities that took place in the framework of WP3: Joint Seismic Risk Assessment of School Buildings and is related to T3.2: Joint assessment of seismic risk in the Greece-Türkiye CBA (school buildings in the pilot sites).

1.2 SCOPE AND OBJECTIVES

The scope of this document is to outline the activities carried out within the framework of Task 3.2 aimed at accomplishing the project objectives. These efforts are ultimately geared towards attaining the Specific Objective of "Risk Assessments" as stipulated by the funding Programme under the Call "Prevention and Preparedness Projects on Civil Protection and Marine Pollution (UCPM-2022-PP)."

In pursuit of this goal, the present deliverable places emphasis on the following project objectives:

- Joint data and information sharing is established over a Rapid Earthquake Damage Assessment (REDA) platform.
- Harmonizing procedures for seismic risk assessment in areas of high seismicity within the Greek & Turkish Cross Border Area (CBA). To achieve this, existing and widely accepted fragility curves for typical building classes have been reviewed and adopted).
- Joint implementation of earthquake risk scenarios for risk mapping in pilot implementation areas, focusing on school buildings.
- A joint dataset of school building typologies and a harmonized methodology for risk assessment have been implemented in the present deliverable and can be adopted by the respective national authorities.
- Jointly developed procedures and data have been prepared accordingly to facilitate their integration in the near real-time damage assessment module of REDA platform.
- The EU-funded project REDACT (<https://www.redact-project.eu/>) outcome REDA platform has been utilized for the risk assessment of the school buildings in the respective pilot sites.

2 EVALUATION OF AVAILABLE FRAGILITY CURVE SETS FOR THE HARMONIZED IMPLEMENTATION IN THE GREECE- TÜRKIYE CBA

2.1 INVESTIGATION OF AVAILABLE FRAGILITY CURVES DATASETS

Seismic vulnerability and risk assessment studies are important for minimizing the damage caused by earthquakes and post-earthquake preparation. These studies are one of the most important tools in reducing human and economic losses. In addition, seismic risk and loss estimation studies enable public education and awareness raising, estimation of manpower requirements for disaster management, and budget planning. Another objective of seismic risk studies is to ensure that post-earthquake disasters remain within a manageable level. The aim is to identify the elements at risk and the critical areas and then to gain foresight into the potential losses. The first actions taken immediately after the earthquake are crucial to managing the crisis. Therefore, post-earthquake decision-making mechanisms based on scenario-based seismic hazard analyses are of utmost importance. Measuring structural damage or loss immediately after the earthquake and planning initial actions concerning the results obtained is one of the objectives of near real-time seismic risk assessment studies.

Fragility curves are widely used tools for the probabilistic prediction of structural damage to a particular structure or group of structures. The fragility curve expresses the conditional probability of reaching or exceeding a predefined damage state (DS_i) for computed damage(d) under a certain ground motion intensity measure (IM). The mathematical expression of the curves is given in Equation 1.

$$P(d \geq DS_i | IM) = \Phi \left[\frac{1}{\beta_{DS_i}} \left(\ln \frac{IM}{\overline{IM}_{DS_i}} \right) \right] \quad (1)$$

Where, β_{DS_i} is the logarithmic standard deviation of the “d” conditioned on the IM , \overline{IM}_{DS_i} symbolizes the median value of “d” under a certain IM value, and $\Phi(\bullet)$ represents the standard cumulative distribution function.

In general, fragility curves obtained by considering analytical, empirical, hybrid, and expert judgment methods are mostly developed using lognormal distribution functions. These curves are defined using two statistical parameters, the median and the standard deviation (Baker, 2015).

When a seismic risk assessment study refers to large populations of buildings, the use of structure-specific fragility curves to determine their seismic performance is practically impossible. Deriving fragility curves generally

requires advanced, computationally intensive inelastic analyses of suitable models, which in turn demand detailed knowledge of the structures' properties (such as geometry, materials, reinforcement, loads, etc.). This process is feasible only for pilot cases, as demonstrated in sections 2.2.1 and 2.3.

As part of the REDACt project, our research team has identified the most suitable sets of fragility curves for residential building populations, aimed at assessing seismic risk in large urban areas across the participating countries: Greece, Türkiye, Romania, and Moldova. Similar to the current project, which focuses on a harmonized approach for school buildings in the Greece-Türkiye cross-border region, the REDACt project sought to establish a common framework applicable to residential buildings in all four partner countries. It was observed that although fragility curve sets are available for specific countries (e.g., Kappos et al., 2006; Kappos & Panagopoulos, 2010 for Greece), they typically cover a limited range of building typologies (e.g., only reinforced concrete or masonry buildings), making their application to broader areas challenging due to variations in seismic codes, local construction practices, and other factors. This issue is well-documented in the literature (e.g., Jaiswal et al., 2010; Crowley et al., 2021), and ongoing efforts aim to develop fragility curves suitable for use on a larger, multi-national scale. Currently, for European residential building stocks, particularly in Greece and Türkiye, the fragility curves proposed by Martins & Silva (2021) and ESRM20 (2021) are considered the most appropriate options; the former has been utilized in the REDACt project.

To our knowledge, no existing set of fragility curves for school buildings is applicable on a broader, multi-national scale. Recent studies on the seismic risk assessment of school buildings, such as those by Fotopoulou et al. (2022), Chrysostomou et al. (2015), Ludovico et al. (2023), Muñoz et al. (2007), and Giordano et al. (2019, 2021), each address specific aspects of the school building typologies they examine. However, these studies are tailored to the unique characteristics of their respective contexts, making it impractical to combine them into a unified dataset.

School buildings are typically designed according to the same seismic codes as the residential ones, but with a higher importance factor (e.g., $\gamma_I = 1.20$ in Eurocode 8), which corresponds to design earthquakes with a longer return period and a lower probability of occurrence (e.g., $T_m = 950$ years, compared to 475 years for standard buildings). Additionally, newly designed school buildings may include specific features that are not found in typical buildings, enhancing their seismic performance due to their strategic and social

importance. In some cases, schools are housed in protected, listed buildings with historical significance, although such instances are relatively rare.

In Deliverable D3.1, as well as in Section 3 of this document, the properties of the building stock across the four pilot sites are thoroughly detailed. It was observed that the school buildings in these areas generally adhere to the same construction practices as the residential structures. Consequently, using generic fragility curves originally developed for residential buildings appears suitable for assessing the seismic performance of the school buildings as well. The fragility curve sets by Martins and Silva (2021) and ESRM20 (2021) are the most appropriate options available and have been incorporated into the REDAS platform for our analyses. As in the REDACT project, we have selected the Martins and Silva (2021) set as our primary option.

Fotopoulou et al. (2022) examined the use of generic versus building-specific fragility curves. In general, the use of generic fragility curves of residential buildings for the seismic risk assessment of schools is on the safety side, resulting in more conservative damage estimates.

It is important to note that the REDAS platform, developed by our research team and utilized for the risk analyses in this study, offers the flexibility to implement various sets of fragility curves. Additionally, it can be updated with new fragility curves as needed, ensuring adaptability to evolving requirements.

2.2 FRAGILITY CURVES APPLICABILITY FOR THE SCHOOL BUILDING STOCK IN THE GREEK PILOT SITES

2.2.1 Analysis of a typical school building in Alexandroupolis

The building under study is part (Section 3) of the building group of the 4th High School of Alexandroupolis (Figure 1). The group of buildings was designed in 2011 based on the provisions of the EAK/2000.

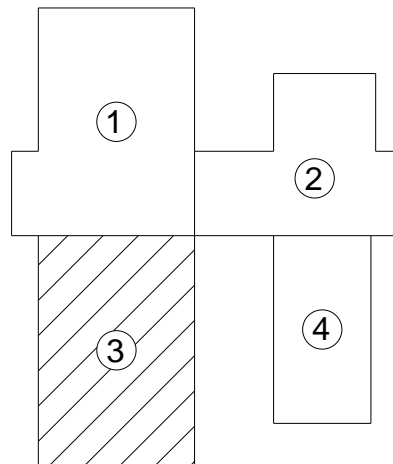


Figure 1. Sketch of the buildings of the 4th high school of Alexandroupolis

The building under study is statically independent and separated from the other buildings of the group, with joints but with a common foundation. It has two floors (net ground floor height 3.85m, net first floor height: 3.9m), a rectangular floor plan with dimensions 19.75m x 29.15m and the roof is non-passable. The building is regular in elevation and plan view according to the criteria of EN1998-1. The structural system of the building consists of reinforced concrete frames and walls. Based on the classification of structural systems of EN1998-1 the building belongs to the category of mixed systems. The slabs of the ground floor and first floor roof are solid (18cm thick) in the halls and ribbed (35cm thick) in the classrooms. The building has no basement, but it has a strip foundation (foundation level at -2.10m). The foundation soil belongs to category B according to the soil categories of the EAK/2000 based on the data collected during the design procedure. The materials used for the construction of the structural system are concrete of grade C20/25 and steel of grade B500C for longitudinal reinforcement and transverse reinforcement. Data for the formwork of the building are given in Figures 2-5. The building has perimeter optoblock infill masonry walls (3.6kN/m²) and internal ones (2.1kN/m²) to separate the rooms. The building belongs to the importance class $\Sigma 3$ of EAK/2000 ($\gamma_I=1.15$; the corresponding value in EC8 is 1.2), it was constructed in seismic zone I ($\alpha_g=0.16g$) taking into account a seismic behaviour factor $q=3.5$. As regards live loads, the following were considered: Floors 2kN/m², Balconies 5kN/m², Ladders 3.5kN/m². The building includes laboratories and toilets on the ground floor and classrooms on the first floor.

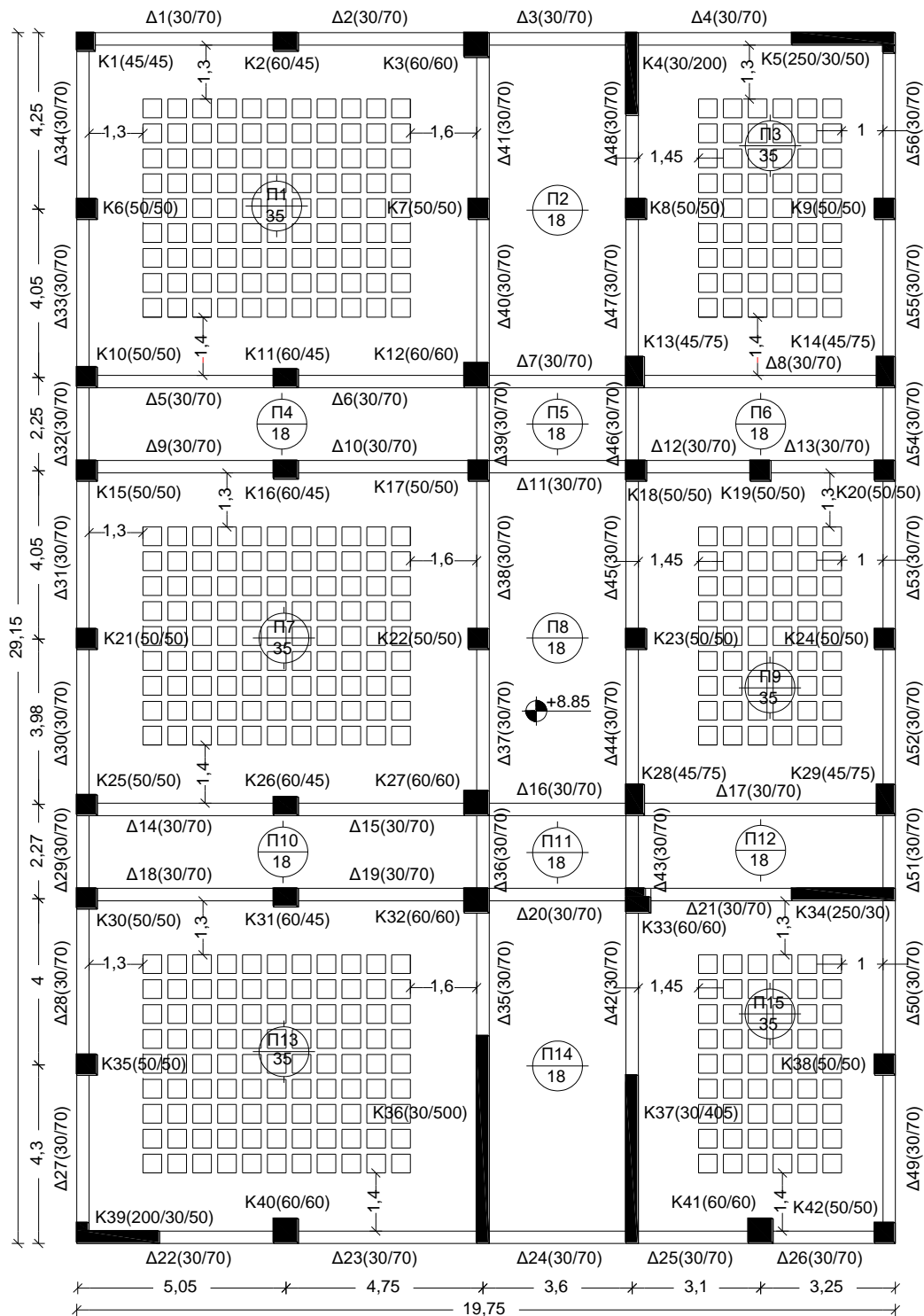


Figure 2. Formwork of the roof of the first floor

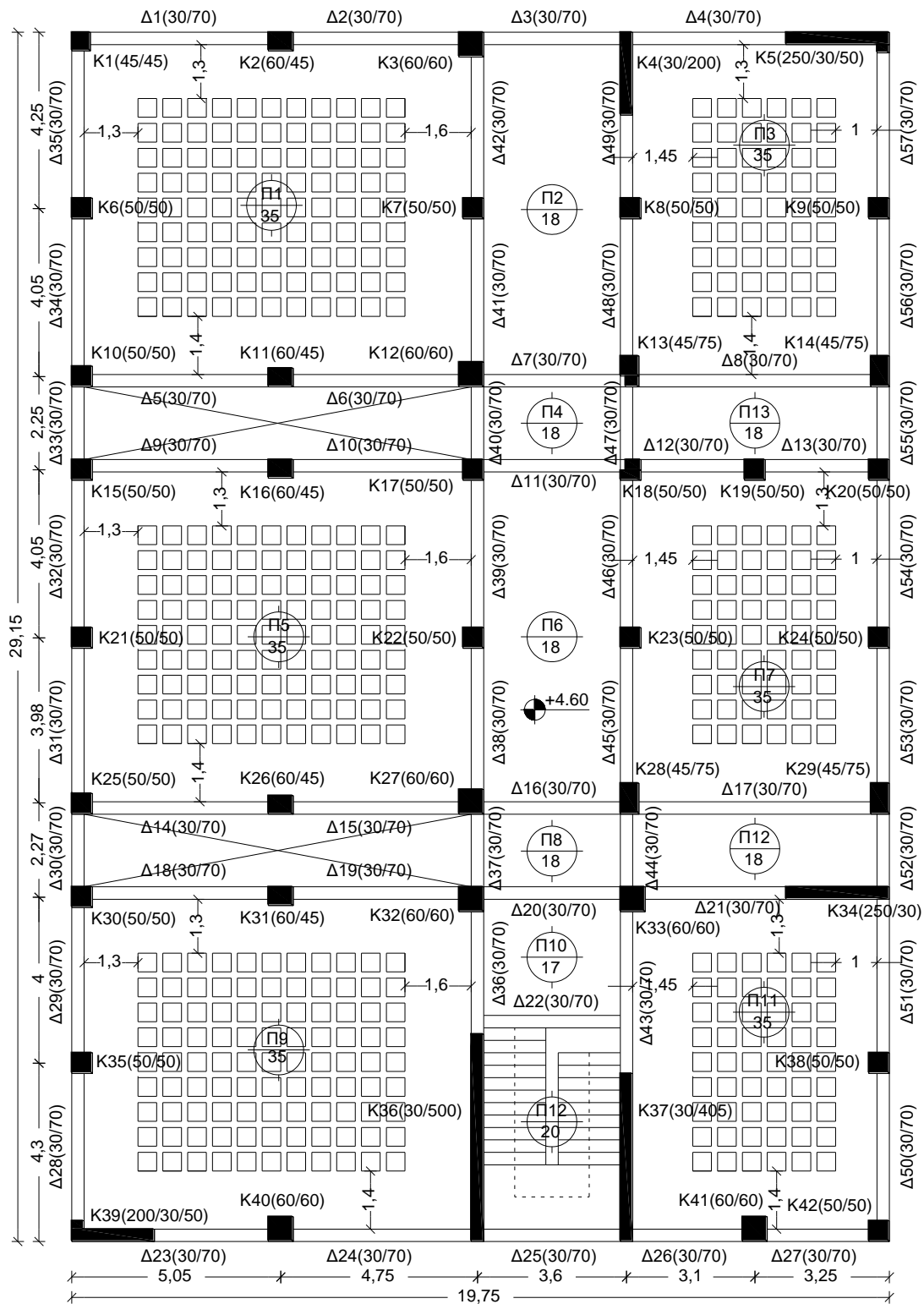


Figure 3. Formwork of the roof of the ground floor

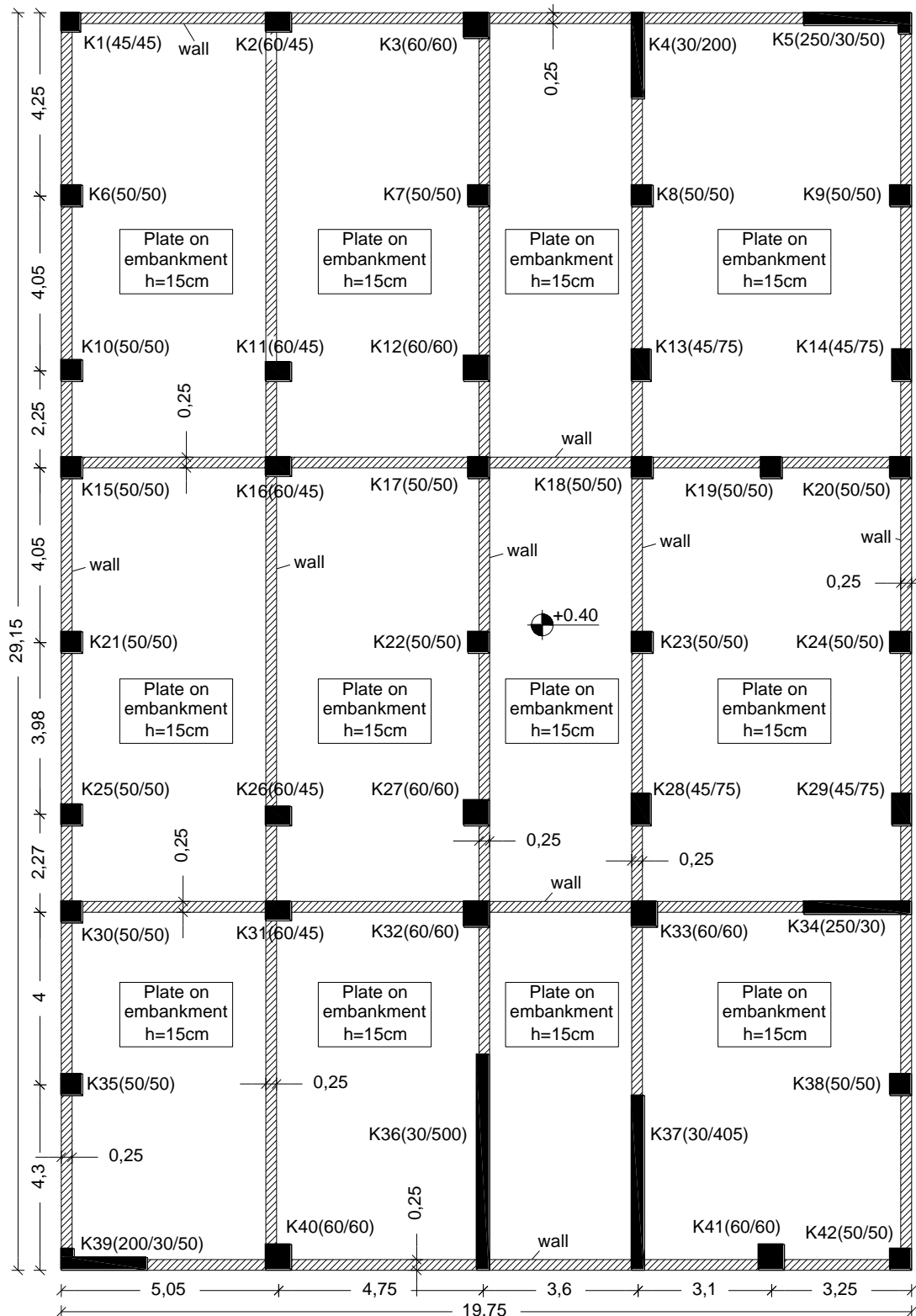


Figure 4. Formwork of the floor of the ground floor

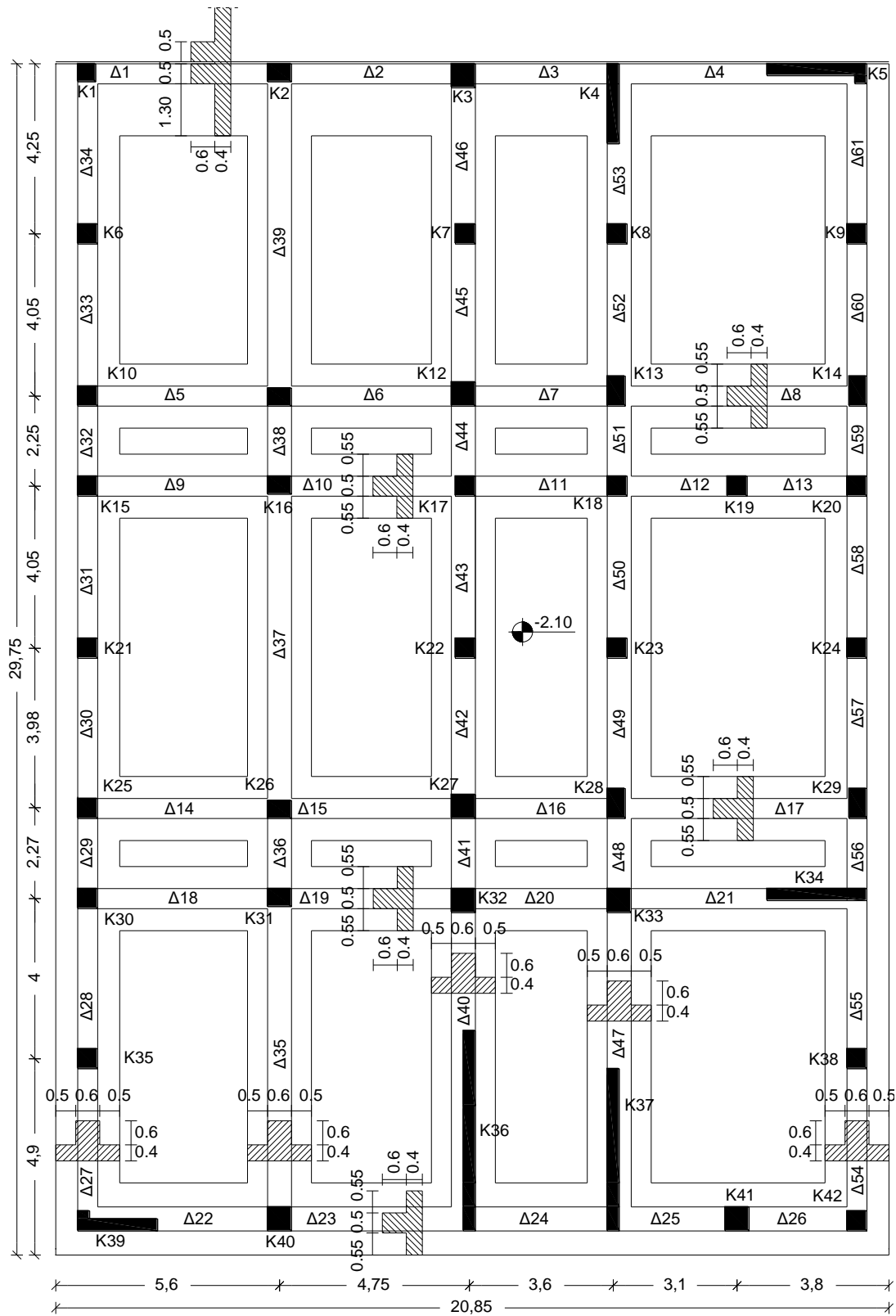


Figure 5. Formwork of the foundation

The building was modelled for elastic and inelastic analysis (static pushover analysis) with the following modelling assumptions:

1. Due to the shape of the floor plan, the slabs of the building were considered and simulated as solid diaphragms. Thus, the masses of the slabs were concentrated at the geometric centers of gravity of the slabs.
2. The stairway was not modeled because due to the fact that it is surrounded by strong reinforced concrete walls, it was assumed that it does not participate substantially in the seismic load transfer.
3. The rigid zones in the region of the beam-columns joints were considered by introducing absolutely solid arms.
4. The building masses were calculated based on the load combination: $G+0.5Q$.
5. The building was assumed to be fully fixed on the ground.
6. For all structural elements, reduced section properties were assumed based on the recommendations of the current Greek Intervention Regulation (KAN.EPE).
7. The concentrated plasticity model was used to model the behaviour of the structural elements in the non-linear stage. Thus, the ends of the beams and columns were considered as potential locations of plastic hinge formation and hence locations of damage occurrence. In addition, all bases of reinforced concrete walls were considered as potential locations for plastic hinge formation.
8. Due to the existence of the strong reinforced concrete walls, the masonries were not modeled. Their influence on the response of the building was considered only through their contribution to the calculation of the mass of the building.
9. For concrete, the stress-strain diagram proposed by the Greek Intervention Regulation (KAN.EPE) was taken into account.
10. The influence of confinement due to transverse reinforcement was considered in the stress-strain diagram of the concrete based on the model recommended by the Greek Intervention Regulation (KAN.EPE).
11. For steel, a bilinear stress-strain diagram without hardening was taken into account.
12. For the strength properties of concrete and steel, their mean values were considered.

Figure 6 presents the model of the building using the Sap2000 software.

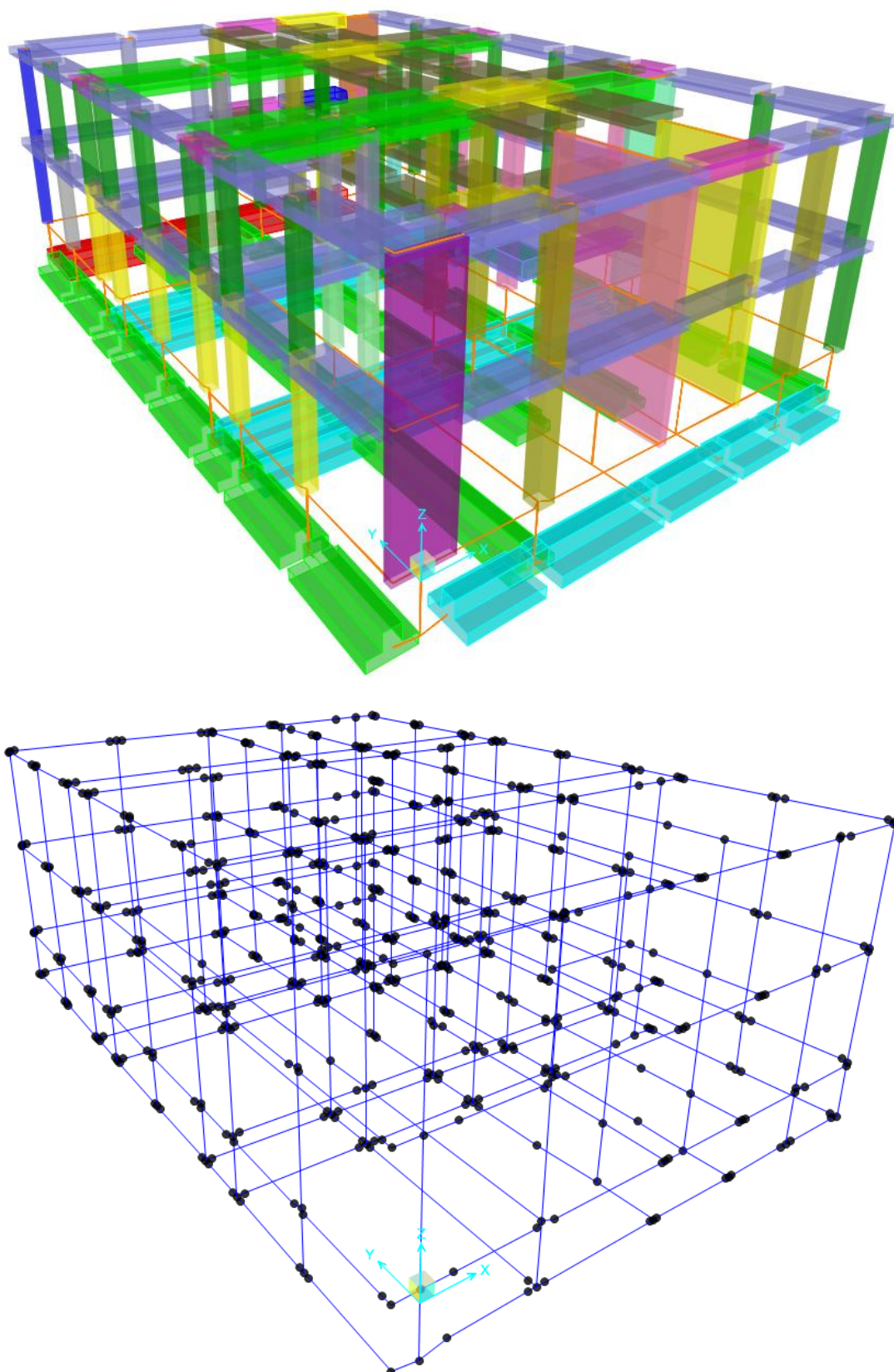


Figure 6. Modelling of the building

The seismic capacity assessment of the building studied was carried out through inelastic static (pushover) analysis. The procedure was mainly based on the methodology and assumptions proposed by the Hellenic Intervention Regulation (KAN.EPE), with minor differences to the one of FEMA273. Initially, static pushover analyses were carried out by applying horizontal loads along the X and Y directions of the building (Figure 6). The resulting pushover curves are presented in Figure 27. The corresponding idealized bilinear curves and the target displacements for the design earthquake according to the Greek seismic code ($a_g=0.16g$ in Alexandroupolis - Zone I) calculated using the coefficient method, as suggested by KAN.EPE have been added to this figure.

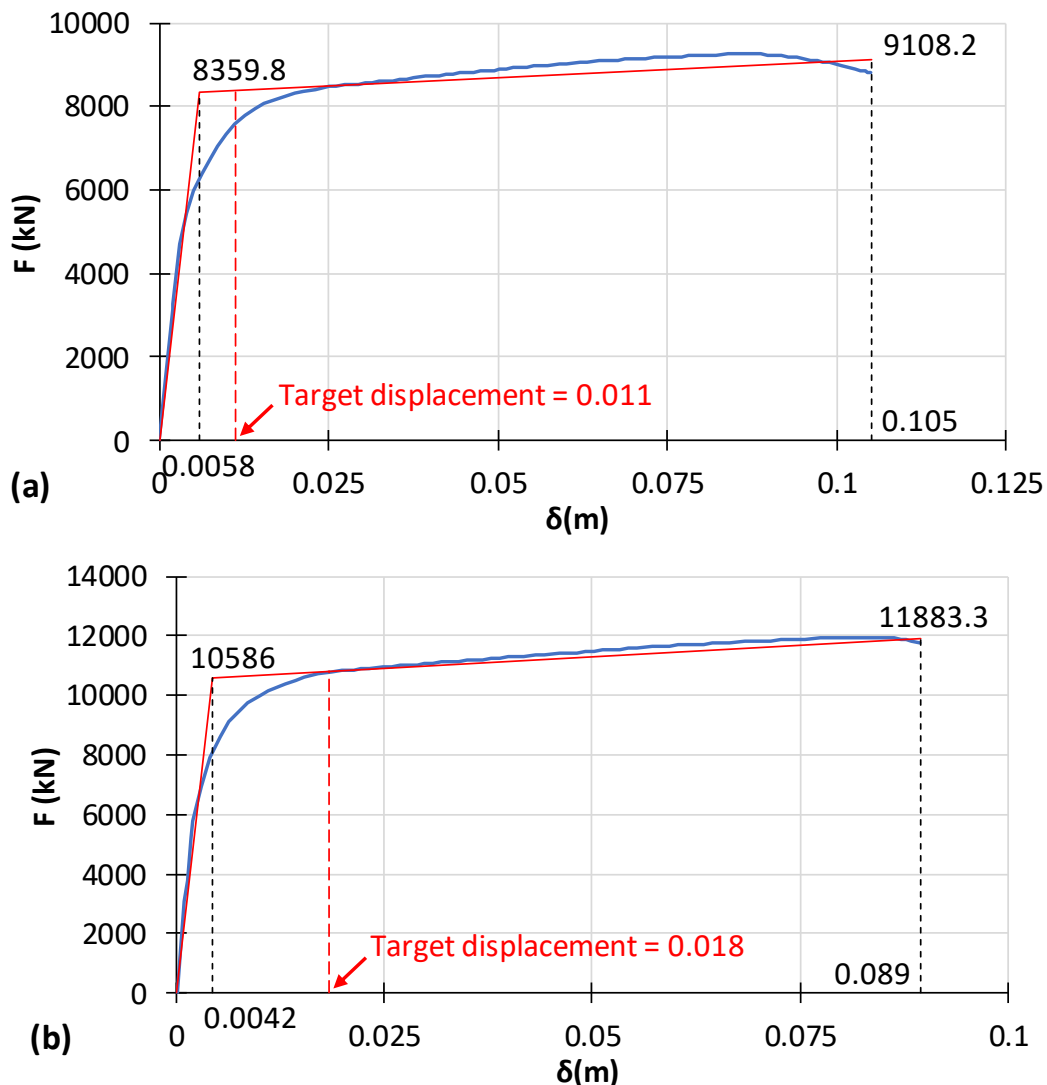


Figure 7. Pushover curves of the studied building: analysis in the X direction (a) and analysis in the Y direction (b)

The pushover curves were converted into the corresponding capacity curves based on the modal properties of the structure, according to the Chopra & Goel, (1999) procedure (Figure 8) and are presented in Figure 9.

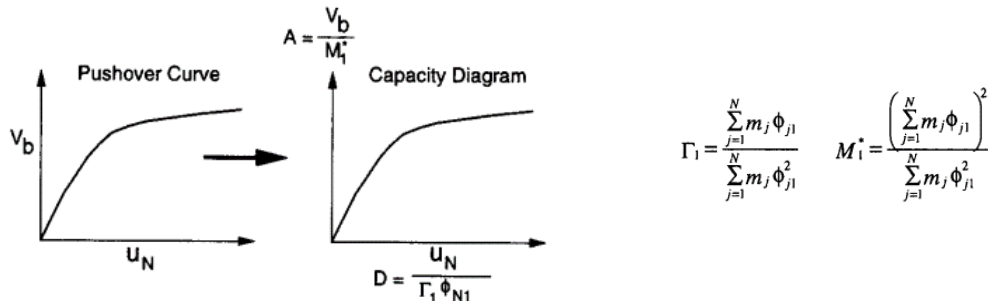


Figure 8. Conversion of pushover curve to capacity diagrams (Chopra & Goel, 1999)

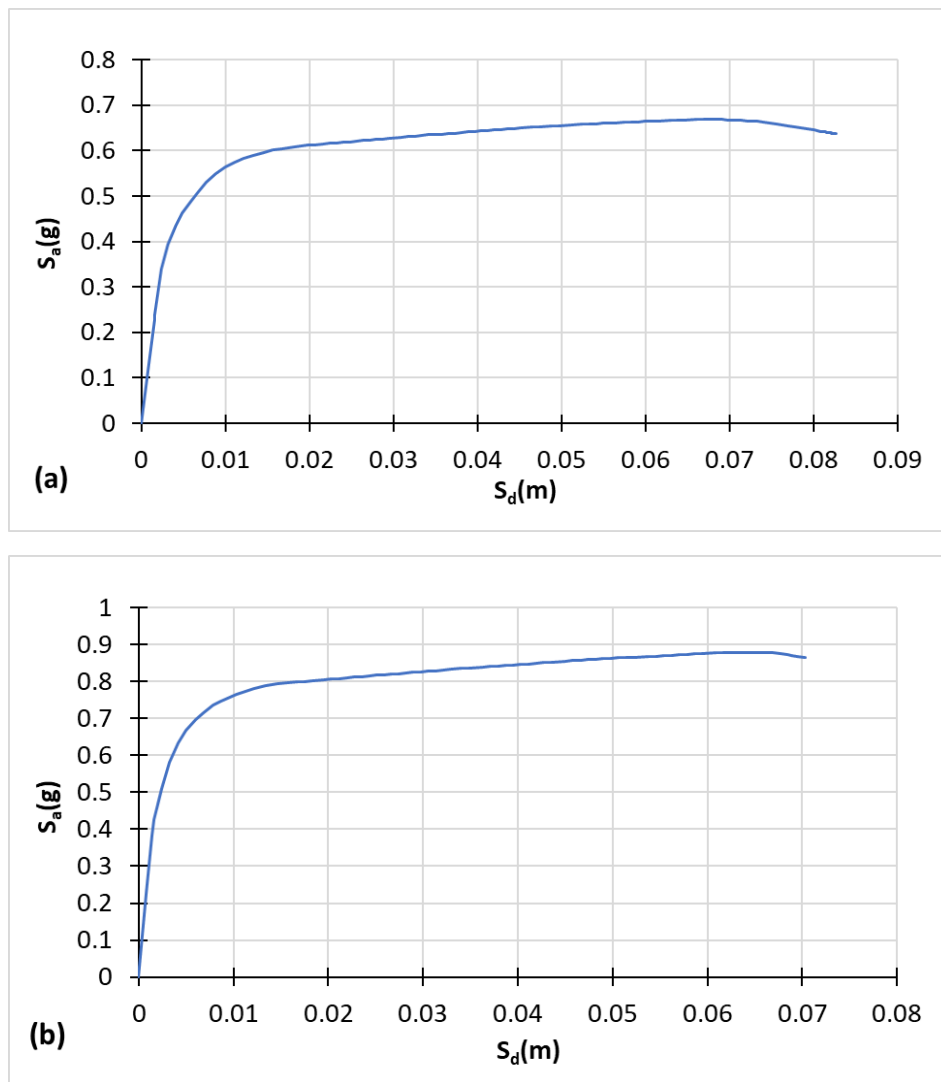


Figure 9. Capacity curves of the studied building: analysis in the X direction (a) and analysis in the Y direction (b)

2.2.2 Comparisons of the pilot school building seismic performance with available fragility curves

To compare the seismic performance of the pilot school building with the available fragility curves, it was necessary to classify the building according to a typical structural typology using the GEM taxonomy. The fragility curves by Martins & Silva (2021) and ESRM20 (2021) were identified as the most suitable for this study. The school building is a two-story, reinforced concrete structure, designed according to modern seismic codes, with shear walls in both primary directions. However, given the limited number of shear walls (the percentages of the base shear taken by shear walls in each direction are $n_{v_x}=55.0$ and $n_{v_y}=73.2\%$), it was decided to assess the building against both dual and frame building typologies: CR_LDUAL-DUH_H2 and CR_LFINF-DUH_H2 for Martins & Silva (hereafter referred to as M&S) and CR_LDUAL-DUH_H2 and CR_LFINF-CDH-15_H2 for ESRM20.

The procedure adopted was the following:

- The median values of the fragility curves, expressed in terms of peak ground acceleration (PGA) for the specified typologies, were identified.
- Using the coefficient method procedure from FEMA 273/KAN.EPE., target displacements were estimated based on the Eurocode 8 elastic spectrum and the median PGA values.
- These target displacements were then converted into spectral displacements (Figure 8)
- The calculated spectral displacement (S_d) values corresponding to each damage state of the fragility curves were plotted against the capacity curves of the structure.

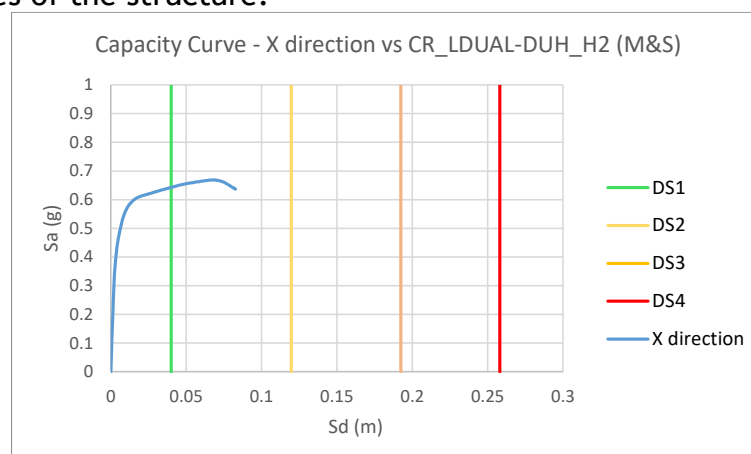


Figure 10. Capacity curve at the X direction of the studied building against the S_d values that correspond to the medians of M&S fragility curves for CR_LDUAL-DUH_H2

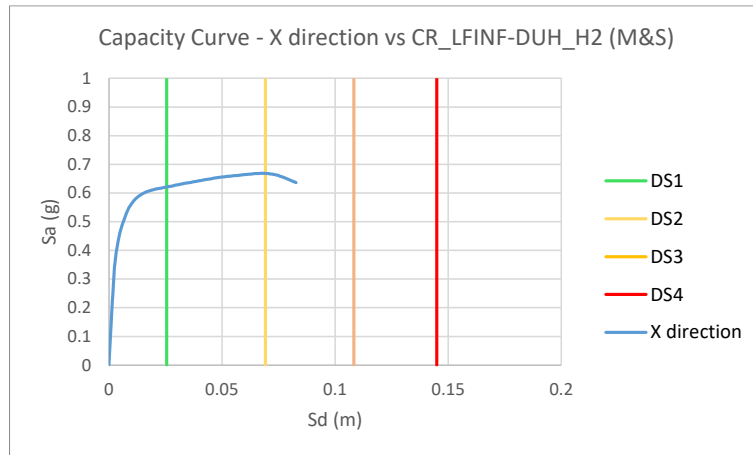


Figure 11. Capacity curve at the X direction of the studied building against the Sd values that correspond to the medians of M&S fragility curves for CR_LFINF-DUH_H2

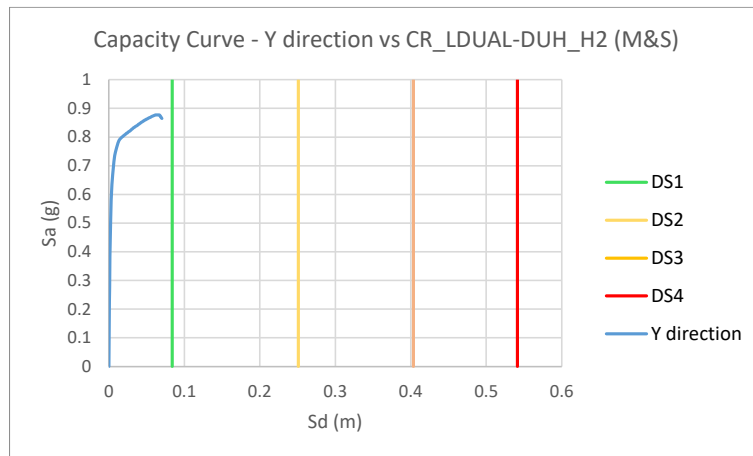


Figure 12. Capacity curve at the Y direction of the studied building against the Sd values that correspond to the medians of M&S fragility curves for CR_LDUAL-DUH_H2

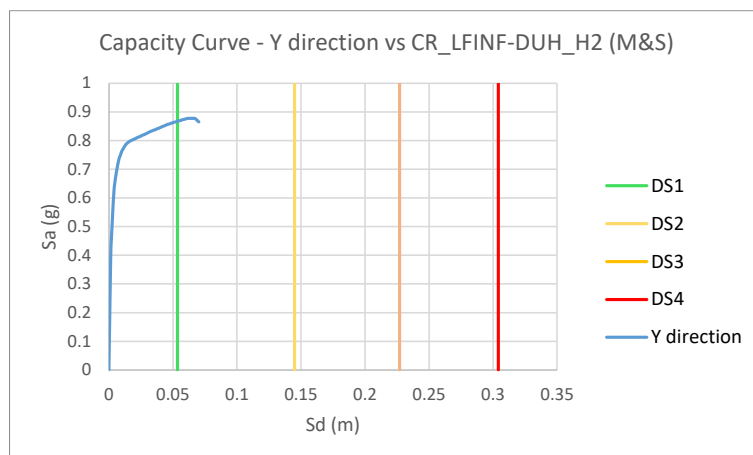


Figure 13. Capacity curve at the Y direction of the studied building against the Sd values that correspond to the medians of M&S fragility curves for CR_LFINF-DUH_H2

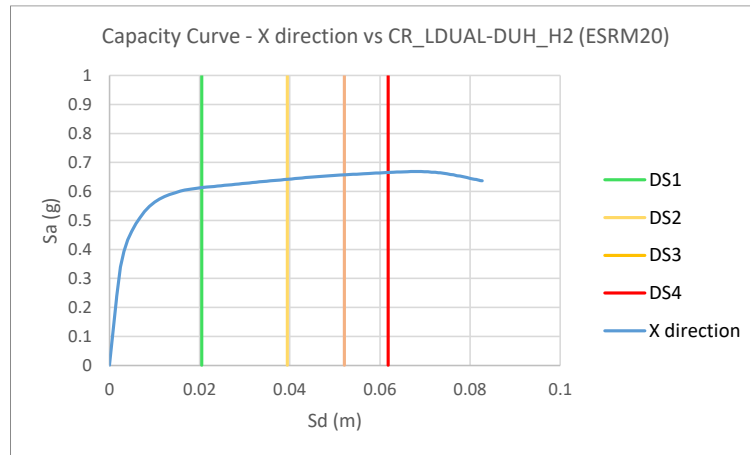


Figure 14. Capacity curve at the X direction of the studied building against the Sd values that correspond to the medians of ESRM20 fragility curves for CR_LDUAL-DUH_H2

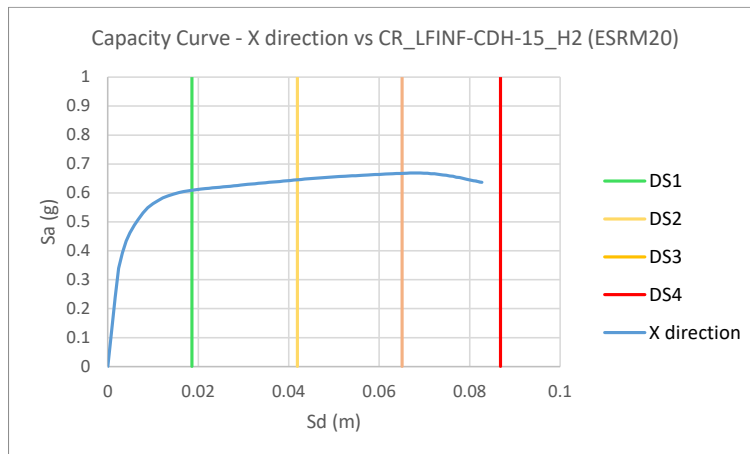


Figure 15. Capacity curve at the X direction of the studied building against the Sd values that correspond to the medians of ESRM20 fragility curves for CR_LFINF-CDH-15_H2

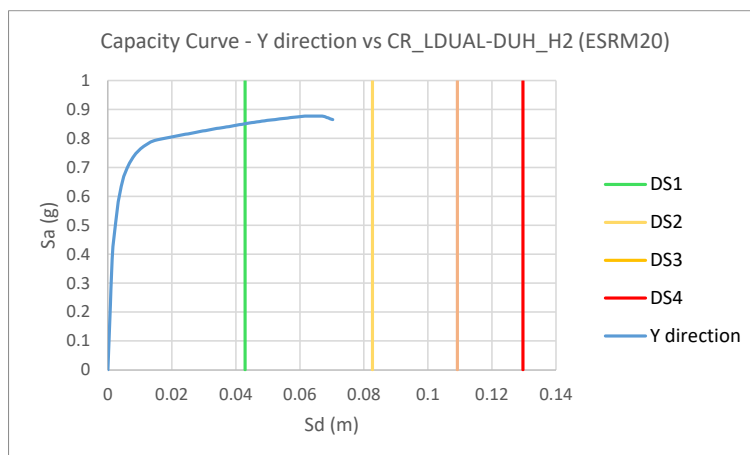


Figure 16. Capacity curve at the Y direction of the studied building against the Sd values that correspond to the medians of ESRM20 fragility curves for CR_LDUAL-DUH_H2

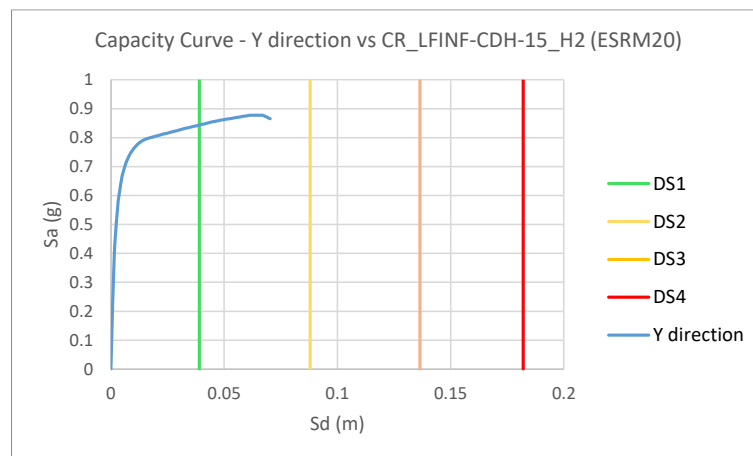


Figure 17. Capacity curve at the Y direction of the studied building against the Sd values that correspond to the medians of ESRM20 fragility curves for CR_LFINF-CDH-15_H2

Figures 10-13 present the comparison of the capacity curves of the typical school building with the median values of the Martins & Silva (2021) fragility curves, while Figures 14-17 present the corresponding comparison with the ESRM20 (2021) fragility curves. It is interesting to note that in some cases the Sd values that correspond to the medians of the fragility curves are placed well along the capacity curve of the structure, especially in the X-direction for the ESRM20 curves. In both cases, the Y direction median values do not place that well and produce non-conservative results. If the Capacity Spectrum Method has been used, instead of the FEMA273 coefficient method, the results would have been somehow improved since latter has been found to overestimate the target displacement (Lin et al., 2014; Hakim et al., 2004).

It should be emphasized that the estimation of the target displacement using the aforementioned procedure is very sensitive to a number of parameters where different assumption could have been considered, for example regarding the modelling of the structure and the definition of the properties that determine its inelastic behaviour, the type of the spectrum for the estimation of the elastic period (code based or a recorded motion), etc. Furthermore, generic fragility curves such as those used herein are impossible to describe well all the individual buildings that have their basic characteristics. They can work well more large populations of buildings but in case of individual buildings significant differences may appear and case-specific analysis is required (Fotopoulou et al., 2022).

The capacity curves of the Martins & Silva, as well as the ESRM20 building typologies are available online on the corresponding repositories. Figures 18-

19. It is noted that for the CR_LDUAL-DUH_H2 typology, both generic capacity curves are identical.

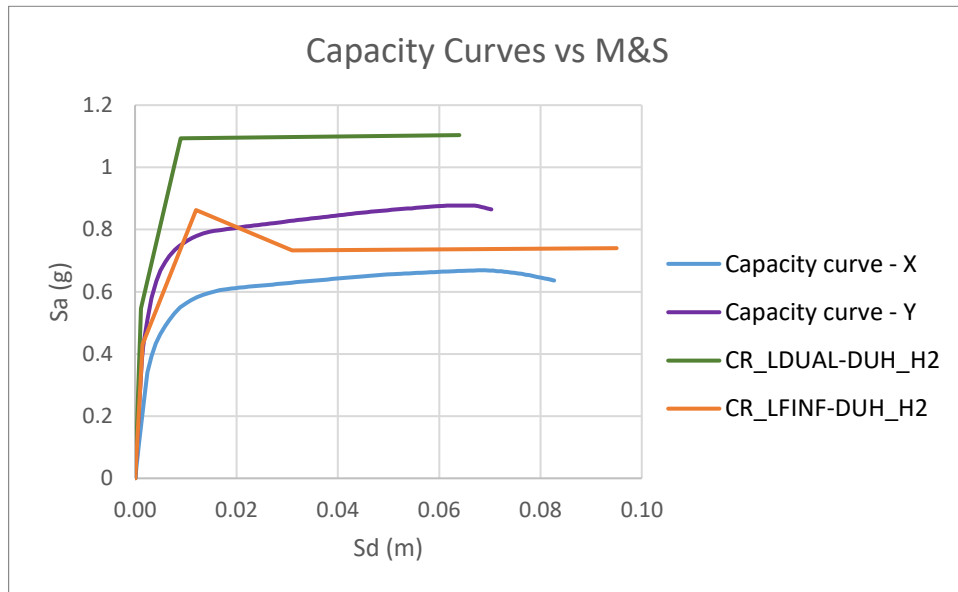


Figure 18. Comparison of the capacity curves of the studies school building with the corresponding generic ones by M&S

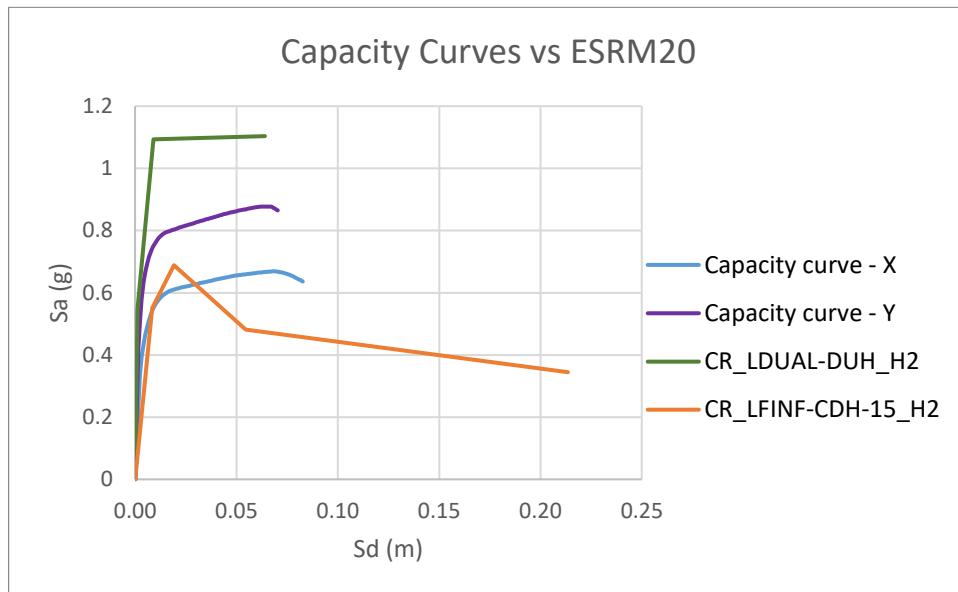


Figure 19. Comparison of the capacity curves of the studies school building with the corresponding generic ones by ESRM20

The fragility curves of the typology of 2-storey reinforced concrete buildings with dual system designed to modern seismic codes are presented on Figure 20 and a significant difference is obvious for the 2 datasets, with the ESRM curves producing much more conservative results. Figure 21 presents the

results for corresponding infilled frame buildings where the differences are not so vast, and again the ESRM20 being more conservative.

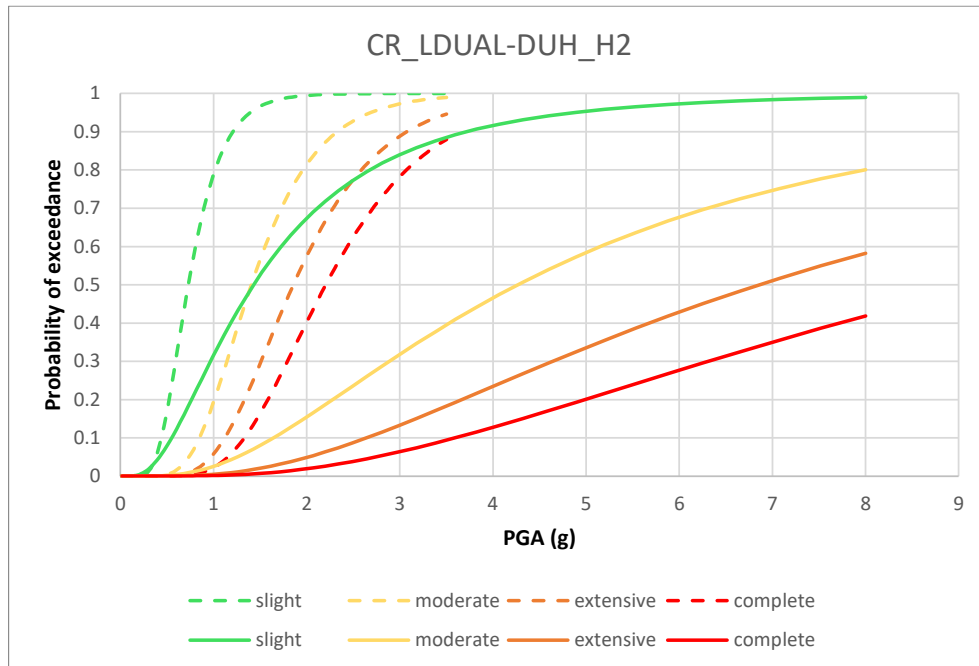


Figure 20. Comparison of the fragility curves by M&S (full lines) and ESRM20 (dashed lines) for the CR_LDUAL-DUH_H2 typology

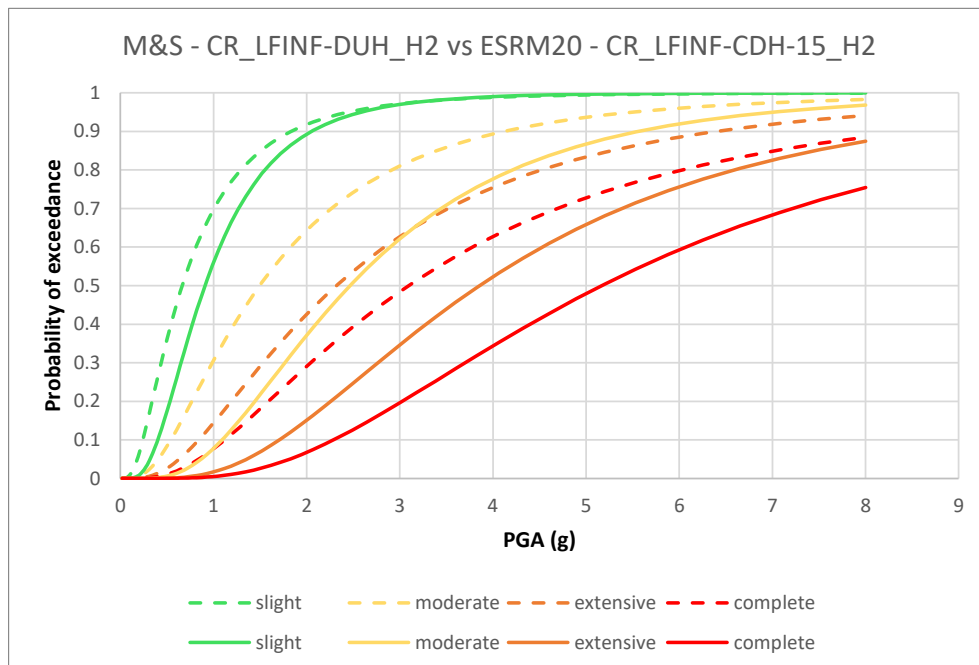


Figure 21. Comparison of the fragility curves for M&S - CR_LDUAL-DUH_H2 (full lines) and ESRM20 - CR_LDUAL-DUH_H2 (dashed lines)

2.2.3 Comparison of fragility curves for common school building typologies in Greece

Some more comparisons for building typologies present in the school building of the Greek pilot sites are presented in Figures 22-25.

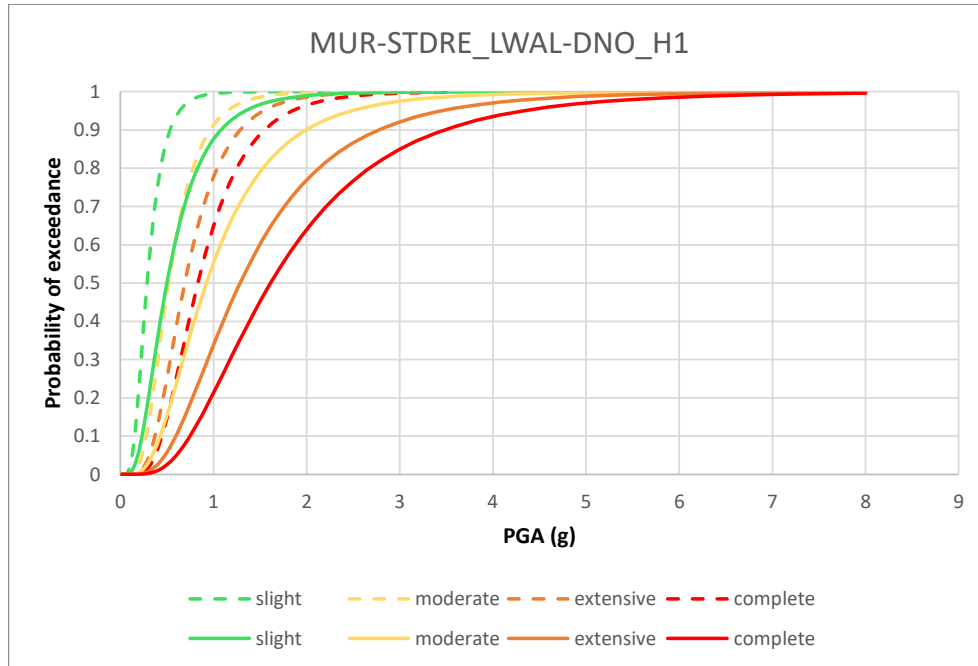


Figure 22. Comparison of the fragility curves by M&S (full lines) and ESRM20 (dashed lines) for the MUR-STDRE_LWAL-DNO_H1typology

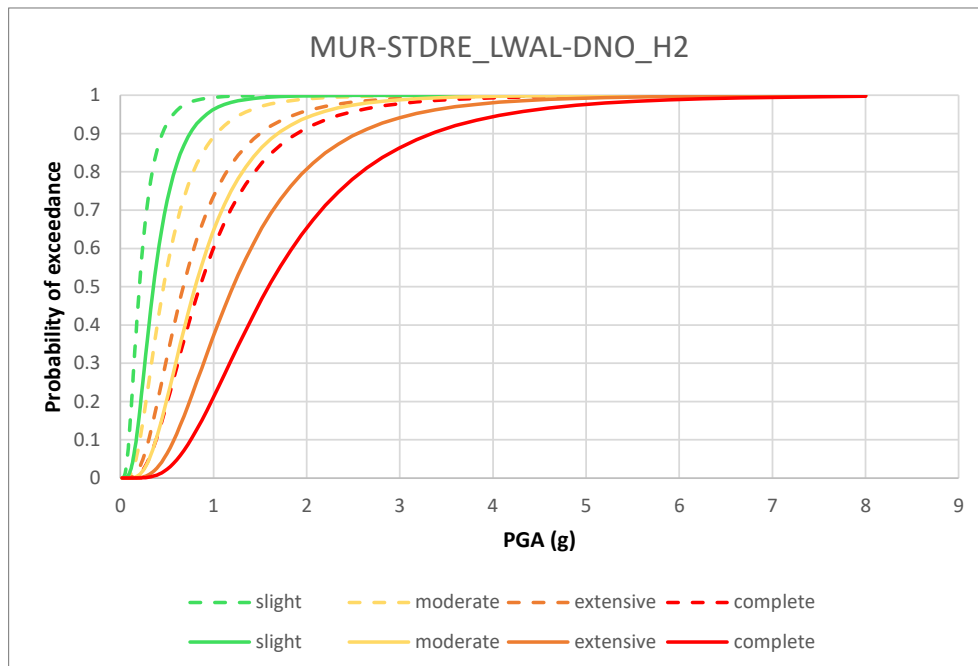


Figure 23. Comparison of the fragility curves by M&S (full lines) and ESRM20 (dashed lines) for the MUR-STDRE_LWAL-DNO_H2typology

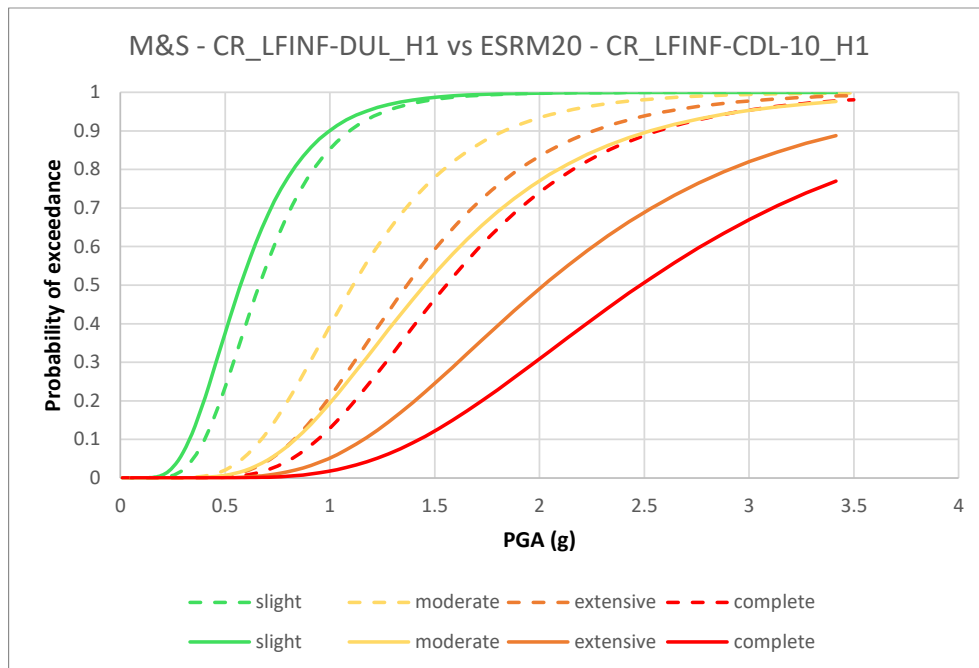


Figure 24. Comparison of the fragility curves for M&S - CR_LDUAL-DUL_H1 (full lines) and ESRM20 - CR_LDUAL-DUL_H1 (dashed lines)

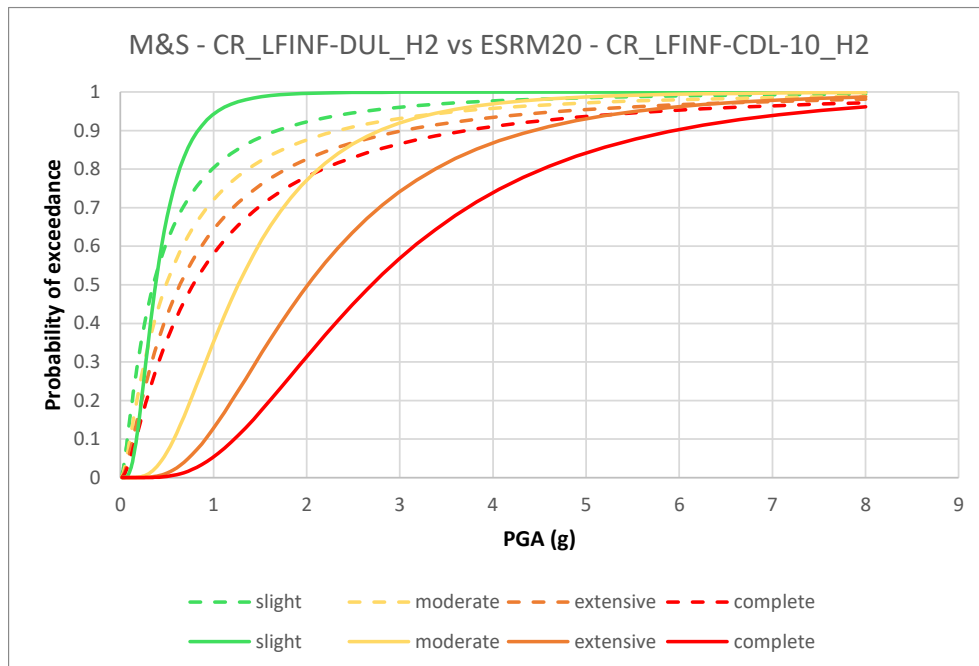


Figure 25. Comparison of the fragility curves for M&S - CR_LINF-DUL_H2 (full lines) and ESRM20 - CR_LINF-CDL-10_H2 (dashed lines)

The trend observed from the aforementioned comparisons indicates that the ESRM20 fragility curves generally, though not always, produce more conservative results, leading to higher damage estimates.

2.3 FRAGILITY CURVES APPLICABILITY FOR THE SCHOOL BUILDING STOCK IN THE TURKISH PILOT SITES

For the implementation of the seismic risk assessment and controlling the thresholds of the fragility curves medians on the capacity curves of the structures; pushover analyses are carried out for an existing typical school building located in Izmir, Türkiye. The 3-D finite element model of the considered structure is shown in Figure 26.

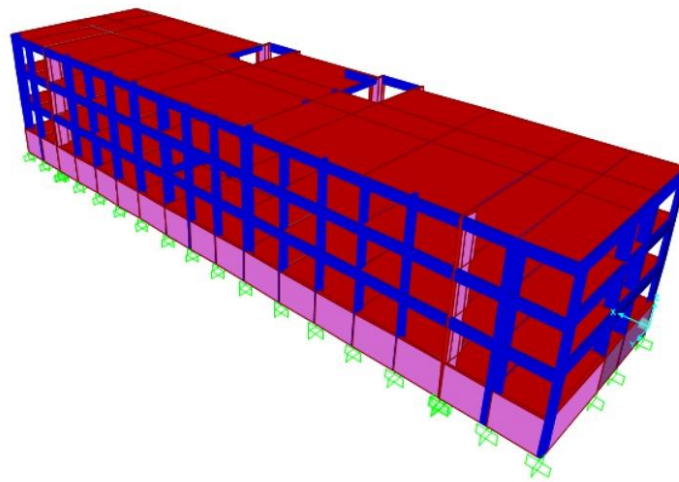


Figure 26. 3D numeric model of the existing school building

The pushover curves obtained for both directions of the selected building are given in Figure 27.

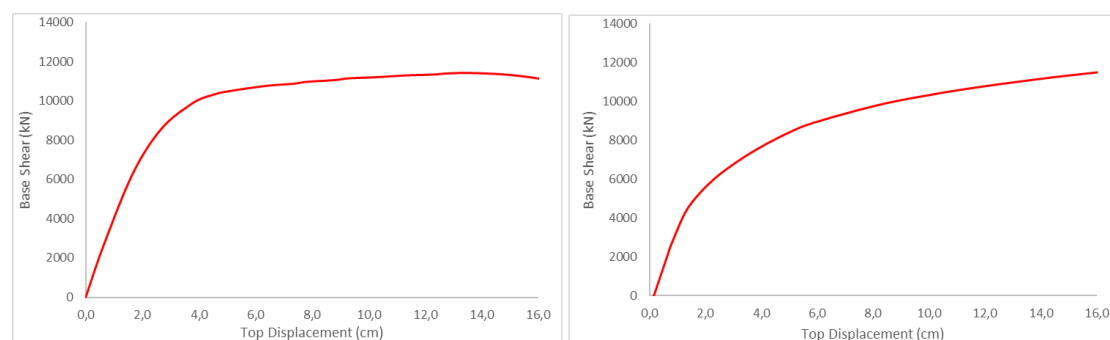


Figure 27. Pushover curves in both directions; X direction (left), Y direction (right)

The fragility curves obtained by using the capacity curves and the appropriate empirical relations [Lagomarsino and Giovinazzi (2006); Mouroux and Brun (2006)] found in the literature are shown in Figure 28 for the x direction and Figure 29 for the y direction.

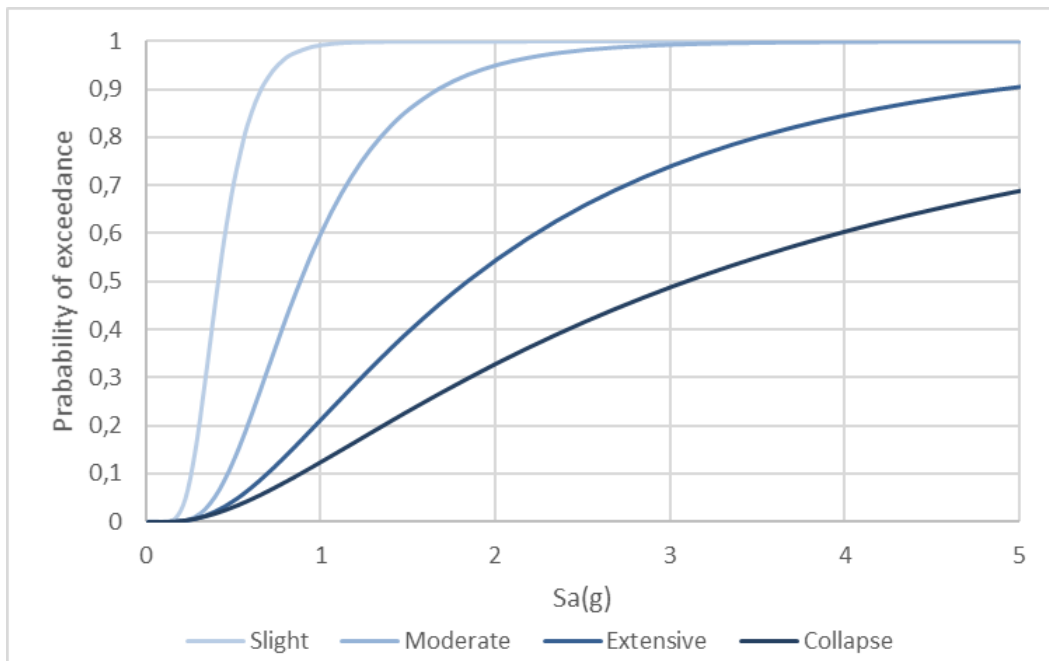


Figure 28. Fragility curve developed for the x-direction

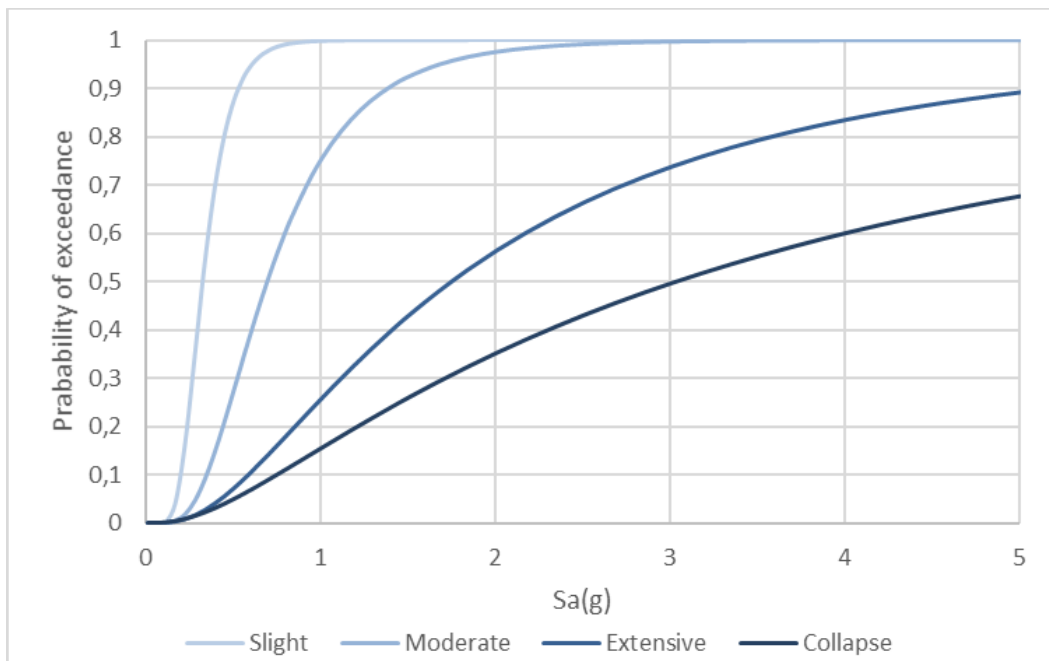


Figure 29. Fragility curve developed for the y-direction

The fragility curves of the school building also were evaluated using the appropriate fragility curves presented by Martins and Silva (2021) and given in Figure 30.

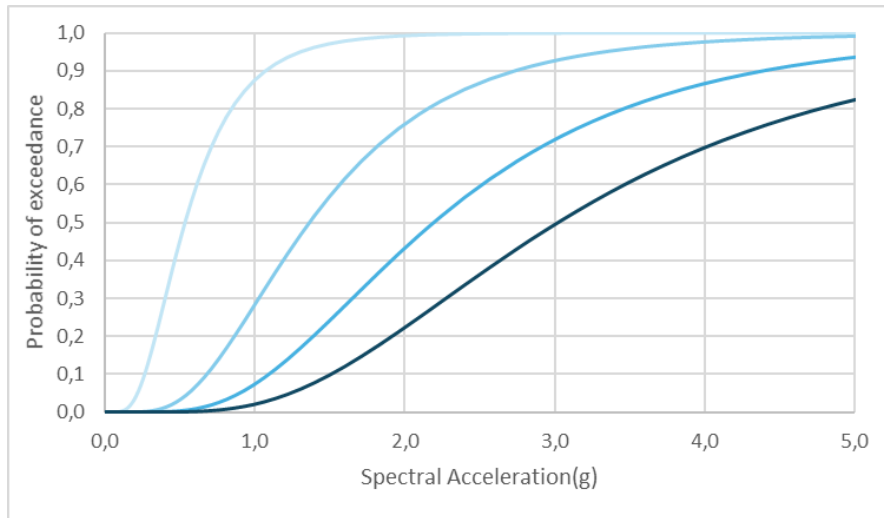


Figure 30. Fragility curves presented by Martin Silva 2021 for mid-rise school buildings

The seismicity of the location has been determined by using TEC 2018 design spectra for the representative school building site in Izmir for the 2% and 10% probability of exceedance in 50 years as DD-1 and DD2 respectively in Figure 31.

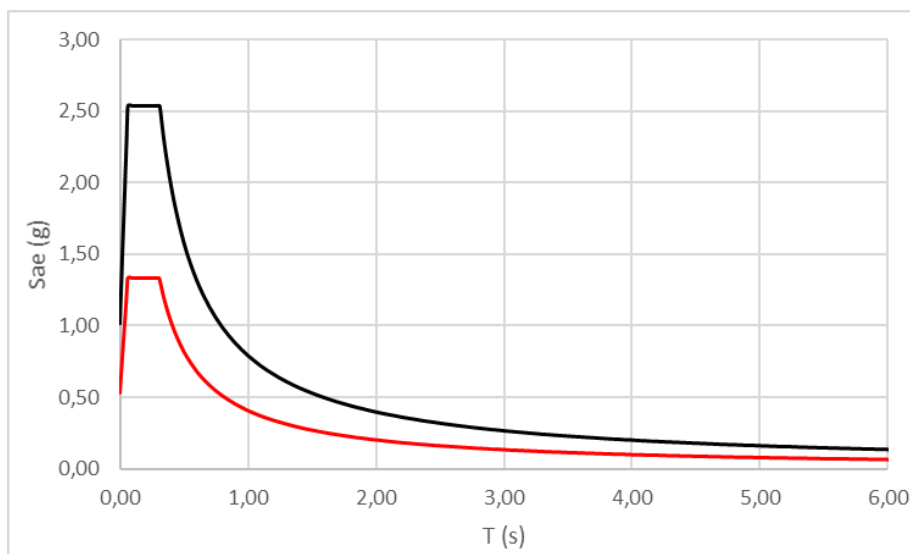


Figure 31. Target spectra for different seismic hazard levels

Considering the cracked section stiffness of the structure, $S_a(T_1, g)$ values were calculated as 0.93 g and 0.48 g for DD-1 and DD-2 seismic hazard levels, respectively.

The consequence models considered in relating the structural damage distribution to the economic loss are shown in Table 1.

Table 1. Consequence models widely used in the literature

Damage State	Central damage ratio (%)			
	Gurpinar et al. (1978)	Askan and Yucemen (2010)	DEE- KOERI (2003)	Bal et al. (2008)
None	0	0	5	0
Slight	5	5	20	16
Moderate	30	30	50	33
Extensive	70	85	80	100
Collapse	100	85	100	100

Depending on the considered consequence models, vulnerability curves are obtained for the typical building regarding the capacity curve and Martin and Silva (2021) fragility functions. Figure 32 represents the vulnerability curve comparisons for X-direction and Figure 33 for the Y-direction.

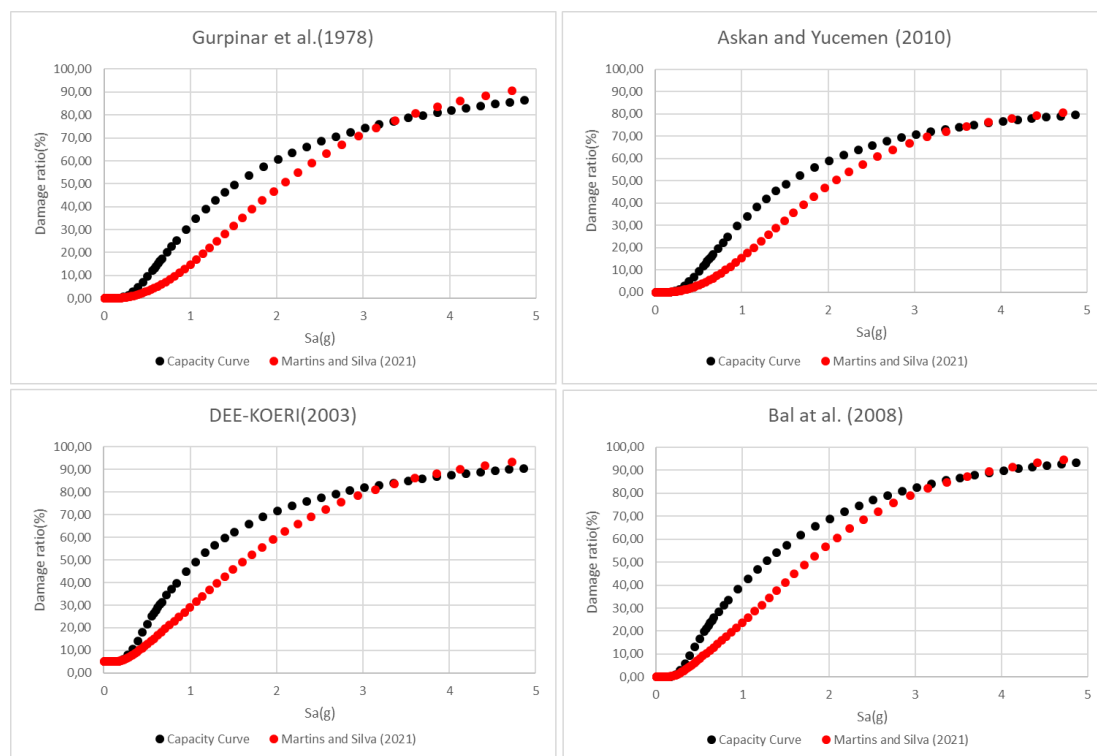


Figure 32. Vulnerability Curves calculated for different consequence models (X-Direction)

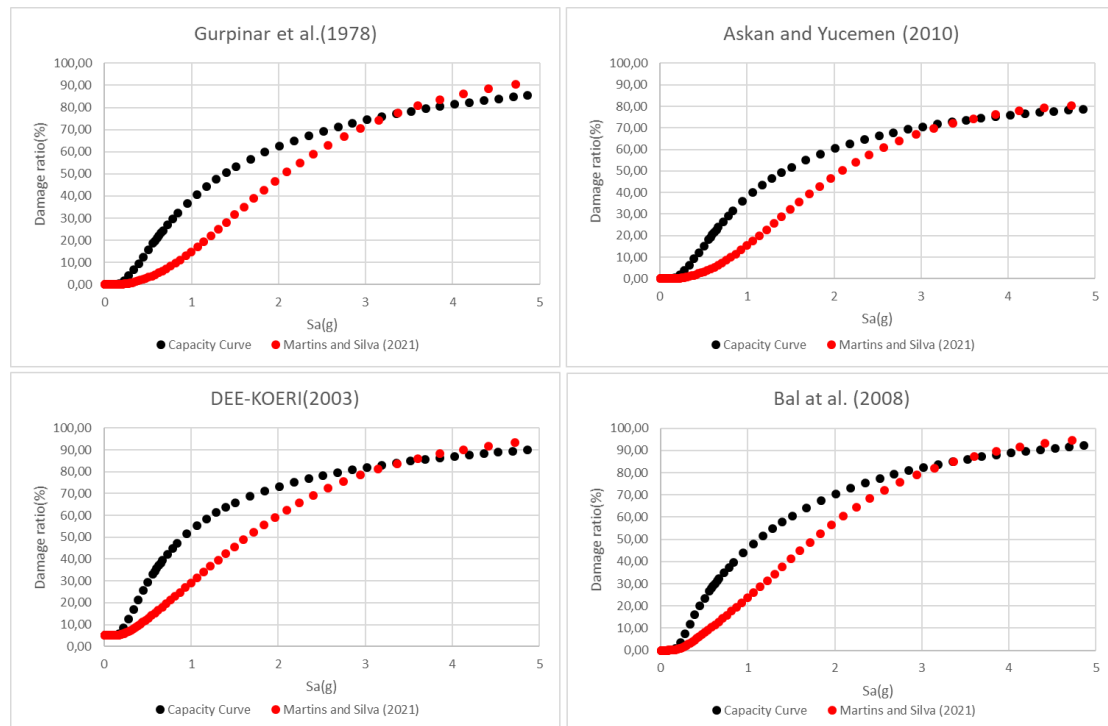


Figure 33. Vulnerability Curves calculated for different consequence models (Y-Direction)

The comparison of vulnerability curves which were obtained by the analysis of the selected school building and by Martins and Silva (2021) fragility functions were presented in the Figure 32 and Figure 33. The evaluation result shows that the selected Martins and Silva (2021) fragility functions are suitable for the seismic assessment of the typical school building stock in Türkiye

3 SEISMIC RISK ASSESSMENT SCENARIOS IN THE PILOT STUDY SITES

3.1 ALEXANDROUPOLIS

3.1.1 School building stock

Extensive data regarding the school buildings in the municipality of Alexandroupolis have been obtained by the Hellenic Statistical Authority (ELSTAT) based on the 2011 National Census, since the 2021 data are not available, yet.

An additional source of data was obtained by Ktiriakes Ypodomes S.A. (KT.YP.), an innovative state-owned company that its activities are overseen by the Ministry of Infrastructure and Transport. KTYP has performed rapid visual screening on 15 school buildings in Alexandroupolis, carried out by proficient structural engineers, providing a very reliable dataset for seismic risk assessment purposes. More details on this dataset can be found on the Deliverable D3.1 of the current project.

Furthermore, additional material was provided by local authorities of the Municipality of Alexandroupolis, including blueprints (Figure 34) and in some cases detailed building design studies of the school buildings where the next generation accelerometers are to be installed.

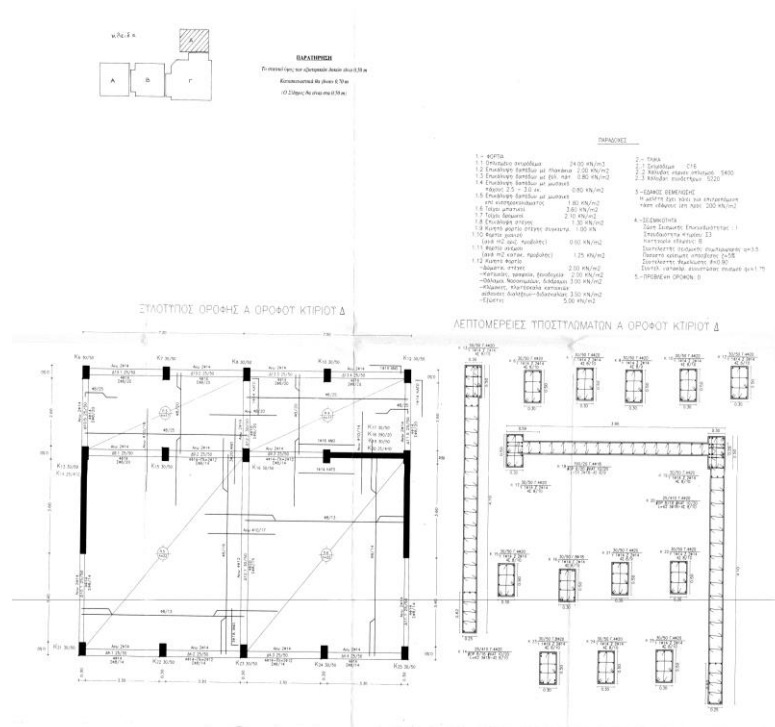


Figure 34. Indicative blueprint of a reinforced concrete school building in the area of Alexandroupolis, designed in late 90s.

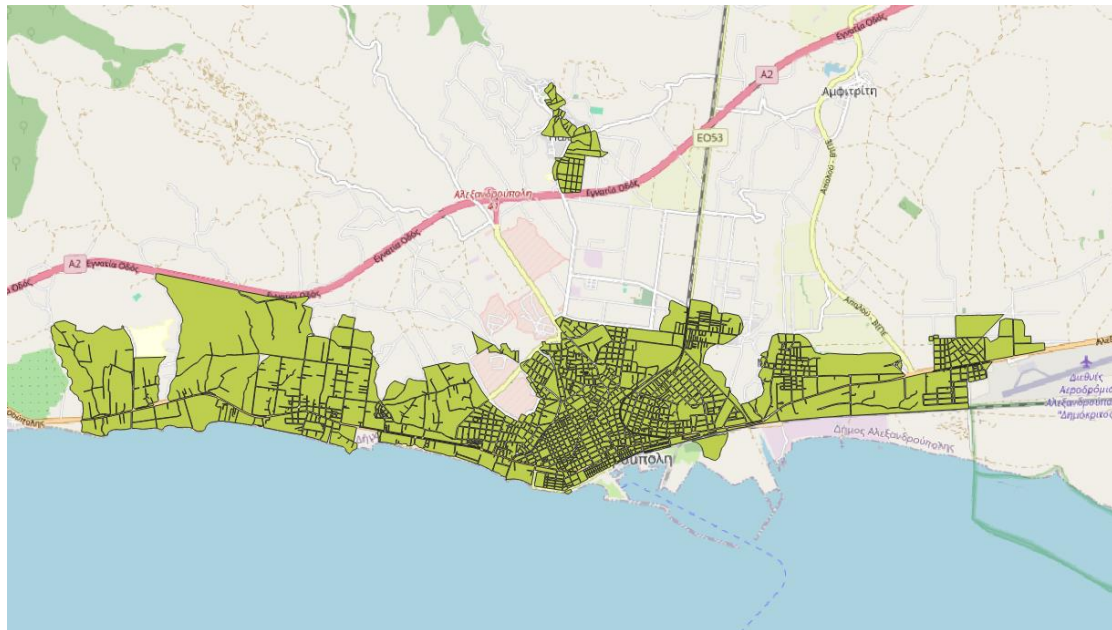


Figure 35. City of Alexandroupolis with region of interest highlighted in GIS

Further verification was sought through in-situ visits by members of the research team as well as by visual inspection through Internet available tools, namely Google maps, Google Earth and Google instant street view (Figure 36).



Figure 36. School building in Alexandroupolis, visually inspected using street view of Google maps.

Specifically, the original ELSTAT database included eighty-five (85) buildings classified as school facilities, as their main or secondary use. However, it was not possible to locate some of these buildings on the map using the provided data. Eleven of these buildings were also found in the KTYP database, with

two being used to update ELSTAT’s records due to the availability of additional information useful for structural engineering purposes. Including the detailed data of the five school building blocks where next-generation accelerometers are to be installed, the total number of school buildings in the Alexandroupolis area, after corresponding updates to the ELSTAT dataset, amounts to 102.

It is important to note that this process has led to a significant update of the school building stock data in Alexandroupolis, compared to the information available when deliverable D3.1 of this project was initially submitted. Consequently, the following figures have been updated to reflect the final version of these data.

The main properties of the school buildings that affect their seismic performance and are available in this dataset are presented in Figure 37.

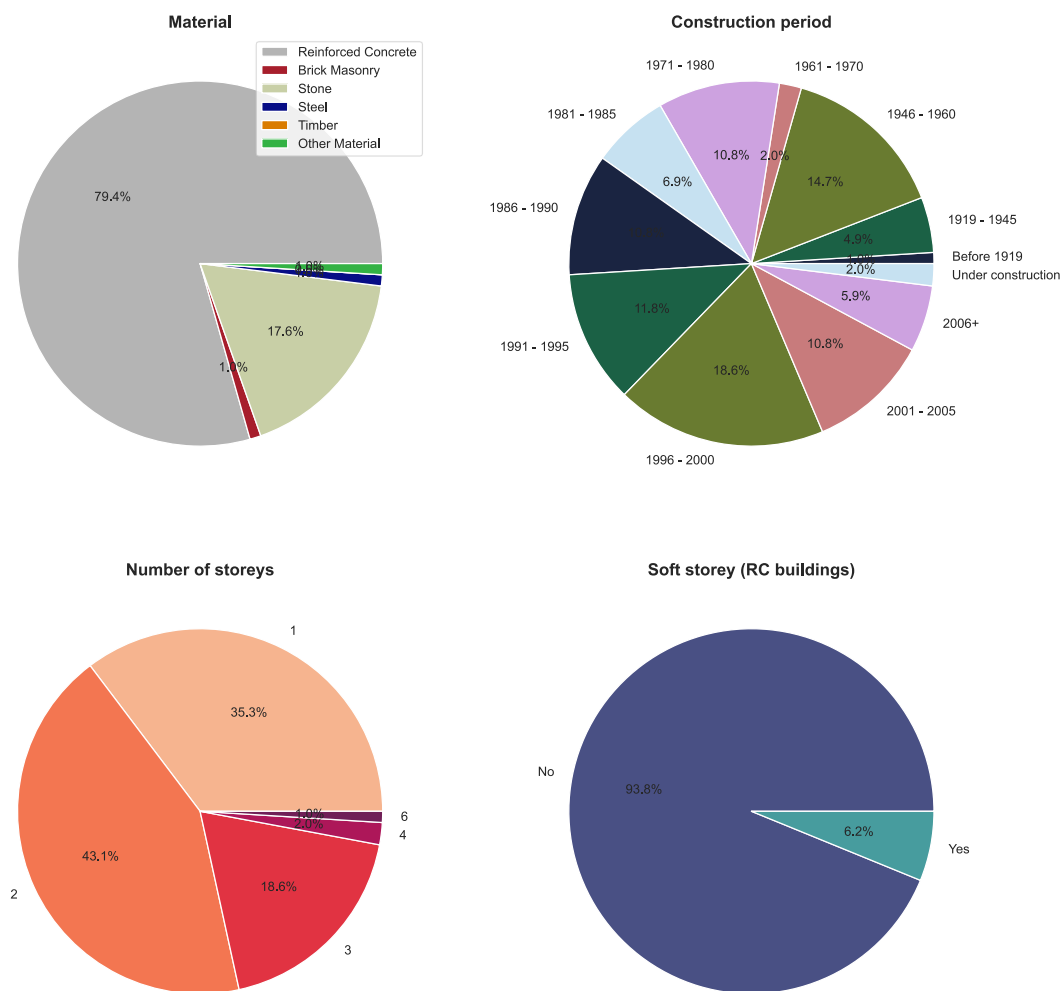


Figure 37. Main structural properties of the school buildings in the city of Alexandroupolis

The majority of the school buildings (79.4%) in Alexandroupolis consist of RC buildings, followed by stone masonry ones (17.6%). Other material types (brick masonry, steel, wood etc.) make up the remaining 3.0%. Regarding the construction period (and hence the respective Seismic Code each building adheres to), it is found that 20.6% were built prior to 1959 with no Code provisions, 19.7% between 1960-1985 (according to 1959 Seismic Code), 22.6% between 1986-1995 (according to the updated in 1985 Seismic Code of 1959), while the remaining 37.1% were built after 1995, according to modern Greek Seismic Codes (NEAK, EAK2000, EC8). The vast majority (97.0%) of the buildings are low-rise (1-3 storeys), with higher (4-6 storeys) buildings consisting the remaining 3%. Of the total building stock, 6.2% have a ground floor soft story (pilotis). Typically, the existence of a soft storey aggravates the seismic behaviour of a building, especially in cases (usually of older buildings) when this effect was not specifically taken into account during the design.

In Figure 38, a detailed analysis of the height of the school buildings in Alexandroupolis is shown for various time periods.

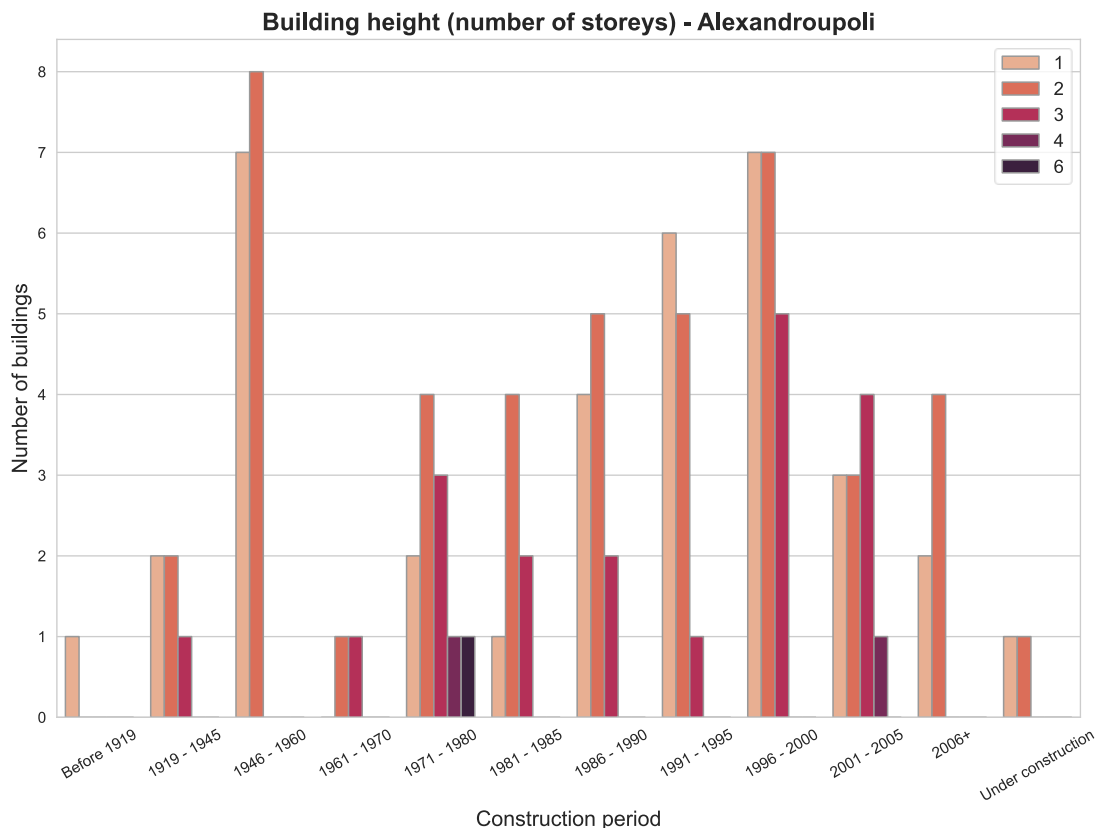


Figure 38. School building height vs construction period in the city of Alexandroupolis

In Figure 39, the material used in relation to the building height (no. of storeys) is presented, with RC being the main material used. As expected, stone masonry is used only for low-rise (1-3 storey) school buildings. Also, materials other than RC and stone masonry are limited to 1-storey buildings.

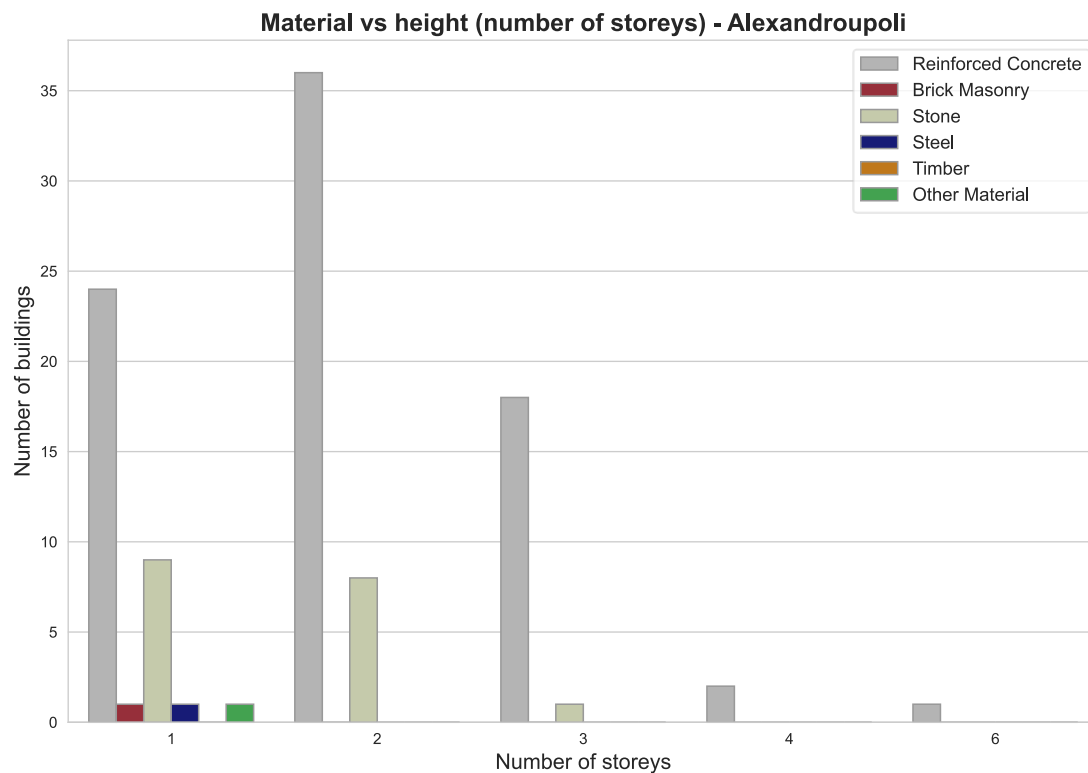


Figure 39. School building height vs construction material in the city of Alexandroupolis

In Figure 40, the use of different materials in different time periods is presented for the school buildings, with RC being the main material used in all periods.

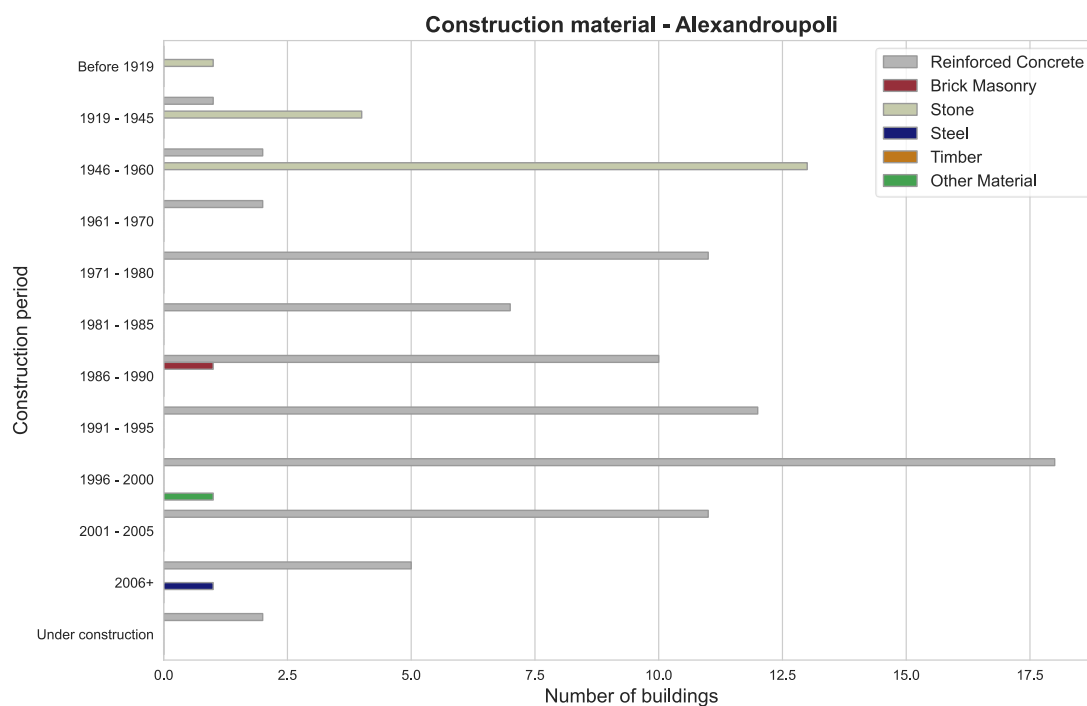


Figure 40. School building material vs construction period in the city of Alexandroupolis

The distribution of RC school buildings with and without ground soft story (pilotis) is presented in Figure 41, in relation to year of construction and building height (no. of storeys), respectively.

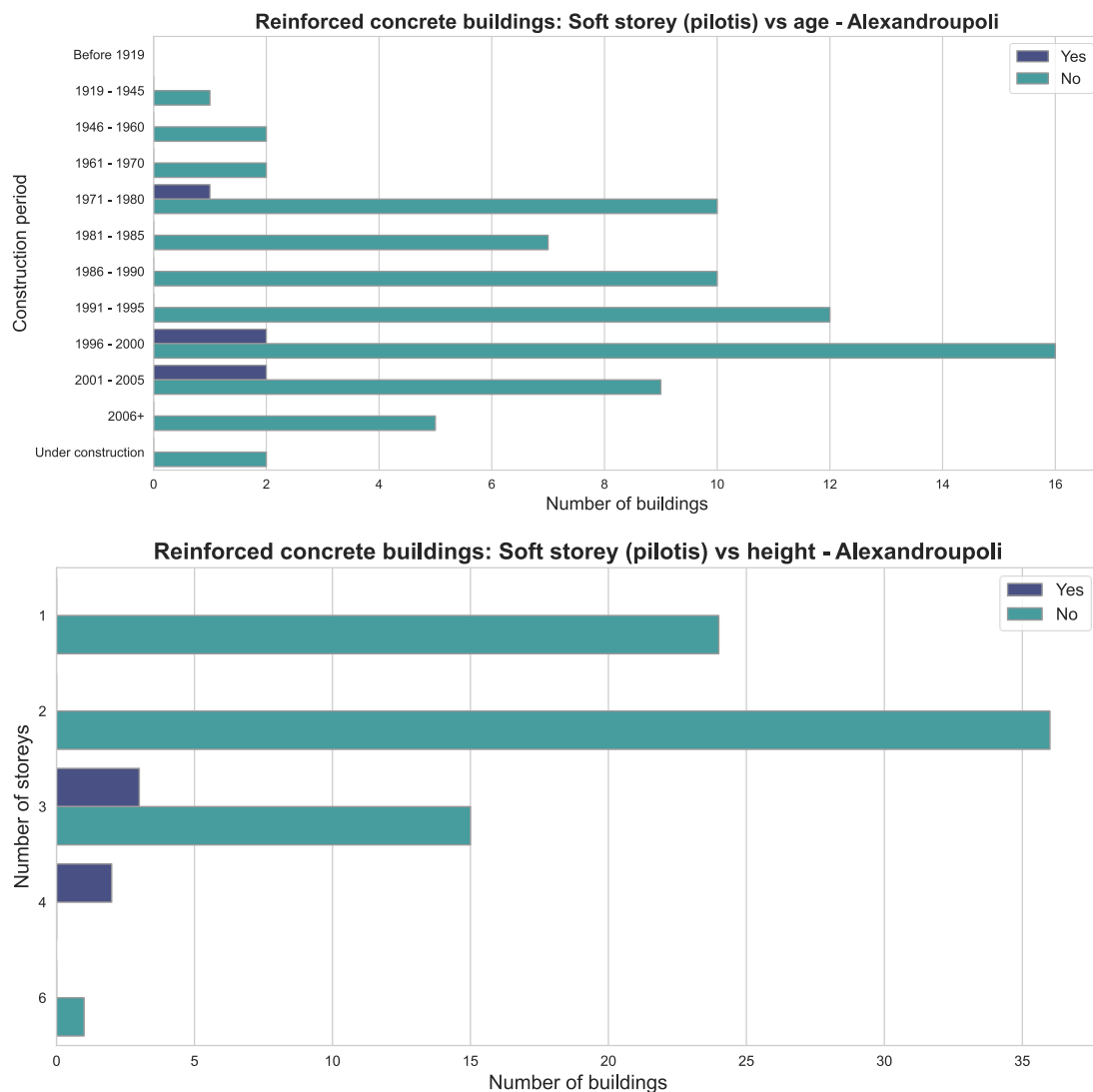


Figure 41. Soft storey vs construction period (top) or school building height (bottom) in the city of Alexandroupolis

All school buildings in the city of Alexandroupolis were assigned to the GEM taxonomy classes (Brzev et al., 2013), for which fragility curves are available based on the study of Martins and Silva (2021). The distribution of the number of school buildings for each GEM typology is given in Figure 42. Each GEM typology is characterized through a “MAT_STRSYS_DUCT_HEIGHT_SOS” label, where *MAT* describes the material type, (e.g. CR-Reinforced Concrete, MUR - unreinforced masonry etc.), *STRSYS* the lateral load-resisting system or material technology (e.g. in case of CR buildings LFINF - infilled frame, LWAL-shear wall, LDUAL - mixed column and shear wall system, in case of masonry LWAL-shear wall system, STDRE - dressed stone masonry etc.), *DUCT* the ductility (DUL- low, DUM - medium, DUH - high, corresponding, regarding RC

buildings, to the 1959, 1985 and 1995 + later Greek Seismic Codes respectively and DNO - Non Ductile, regarding mainly masonry buildings), *HEIGHT* the number of storeys (H4 - 4 storeys), and *SOS* denotes the existence of a soft storey. A detailed description of the GEM building taxonomy can be found in (Brzev et al., 2013).

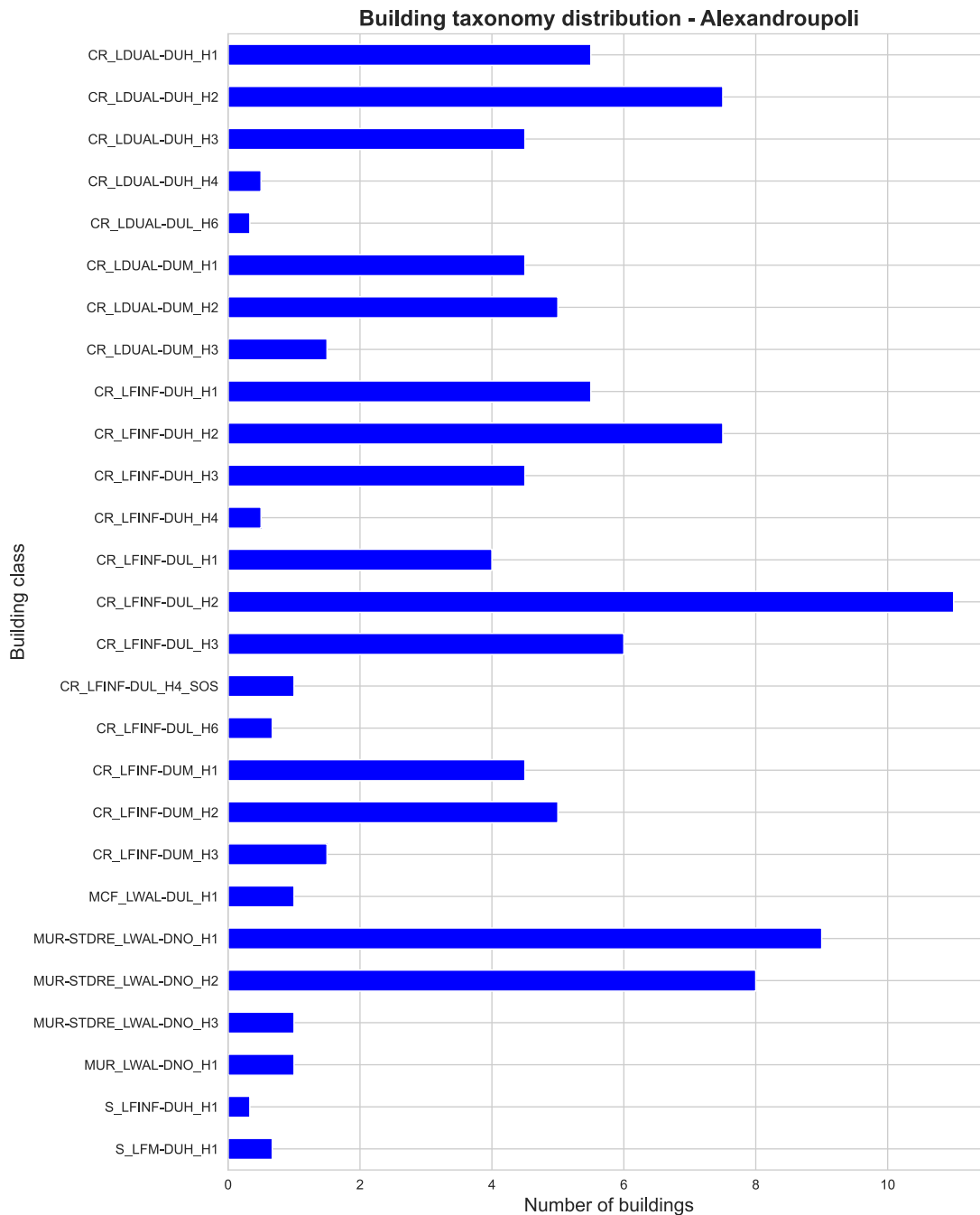


Figure 42. Number of school buildings in each typology according to the GEM taxonomy in the city of Alexandroupolis

Figure 43 illustrates the spatial distribution of material types for school buildings across the various census sectors of Alexandroupolis, as defined by the 2011 ELSTAT National Census. It's important to note that all assessment analyses were conducted at the individual building level concerning structural type and at the building block level concerning seismic motion (acceleration values). The following figures are presented at the census sector level to enhance the visualization of the corresponding attributes. It is seen that in most census sectors the majority consists of RC buildings, with some exceptions, in which stone or brick masonry buildings predominate.



Figure 43. Spatial distribution of the material types of school buildings in the city of Alexandroupolis

In Figure 44, the spatial distribution of school buildings according to their seismic code design level is presented. The buildings are classified as built prior to 1959 (with no Code provisions), between 1960-1985 (according to 1959 Seismic Code), between 1986-1995 (according to the updated in 1985 Seismic Code of 1959), and after 1995, according to modern Greek Seismic Codes (NEAK, EAK2000, EC8).



Figure 44. Spatial distribution of the seismic design level of school buildings in the city of Alexandroupolis (No: <1959, Low: 1960–1984, Moderate: 1985–1995, High: >1996)

Finally, in Figure 45, the spatial distribution of the height of school buildings (no. of storeys) is presented for the city of Alexandroupolis.

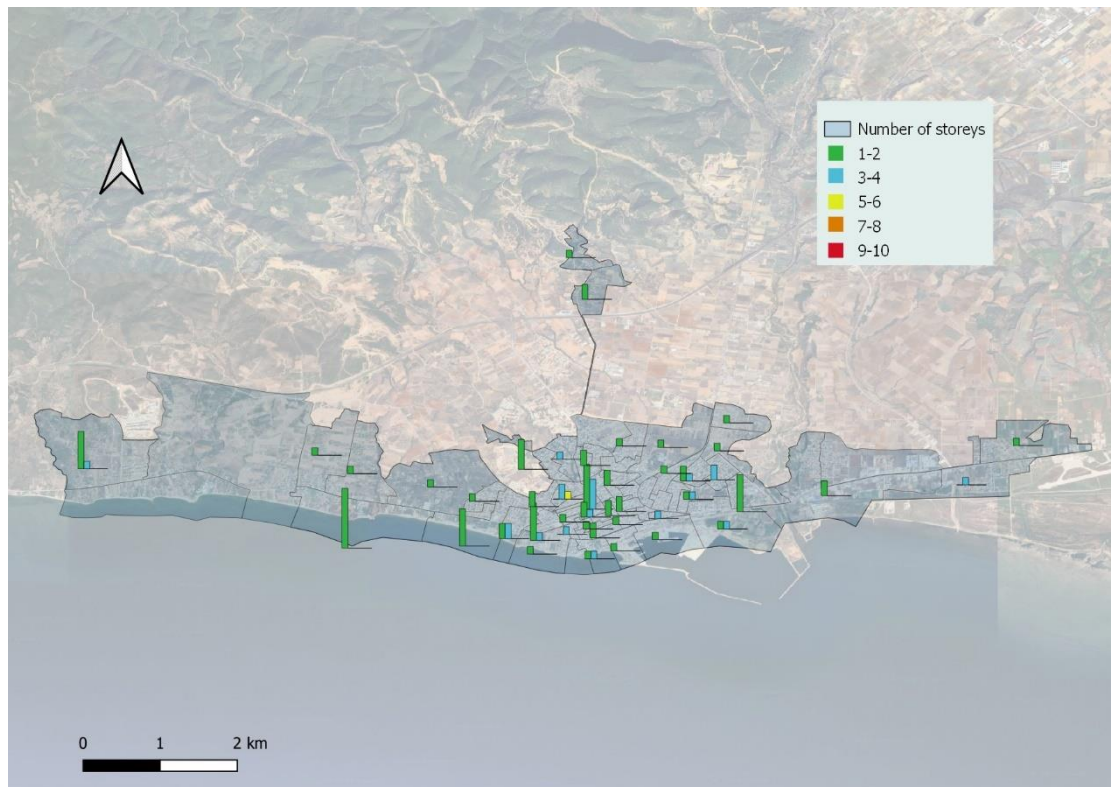


Figure 45. Spatial distribution of the height of school buildings in the city of Alexandroupolis

3.1.2 Hazard scenarios

For the damage estimation of the buildings in Alexandroupolis, five different seismic hazard scenarios were examined, which were developed within WP2.2 of current research program, and which are described in detail in Deliverable D2.2. The scenarios consist of three different probabilistic seismic hazard assessments (PSHA) properly harmonized for the Greece -Türkiye Cross Border Area (CBA), corresponding to mean return periods of $T_m=100$, 475 and 950 years, and two deterministic ones (DSHA) for the pilot area of Alexandroupolis (Maronia-Alexandroupolis and NAF-Ganos).

3.1.2.1 Probabilistic seismic hazard assessment

Figures 46-49 present the PSHA results for the Alexandroupolis pilot site, as estimated in Deliverable D2.2 of the current project. The ranges of the acceleration values are summarized in Table 2.

Table 2. Spectral acceleration ranges of PSHA results for the Alexandroupolis pilot site.

	Tm=100yrs	Tm=475yrs	Tm=950yrs
PGA	0.061-0.069g	0.152-0.187g	0.201-0.253g
Sa (T=0.3s)	0.104-1.118g	0.259-0.321g	0.352-0.444g
Sa (T=0.6s)	0.061-0.067g	0.157-0.196g	0.215-0.273g
Sa (T=1.0)	0.032-0.038g	0.097-0.119g	0.132-0.168g

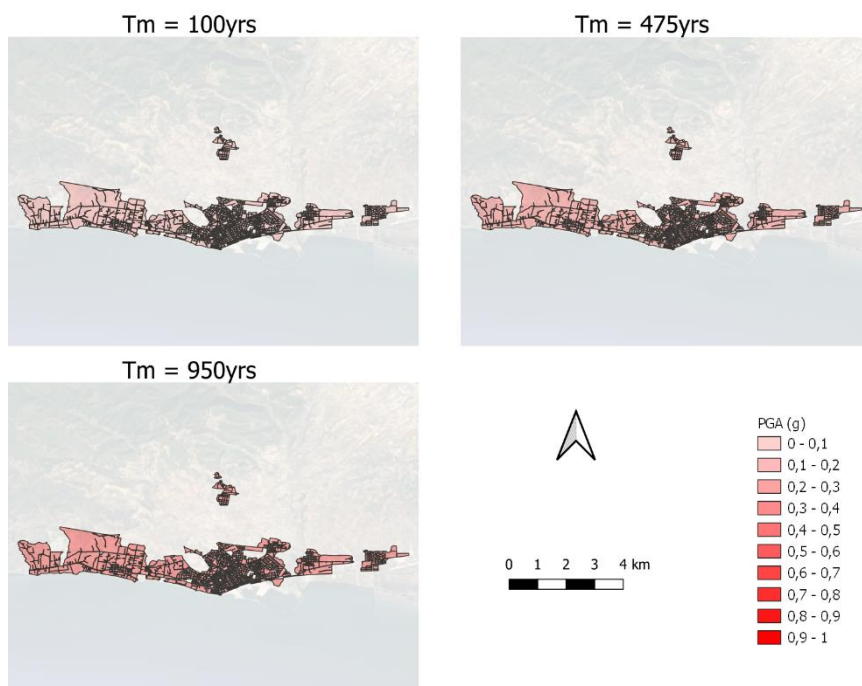


Figure 46. PSHA results for the Alexandroupolis pilot site. Peak Ground Acceleration (PGA), for return periods 100, 475 and 950yrs.

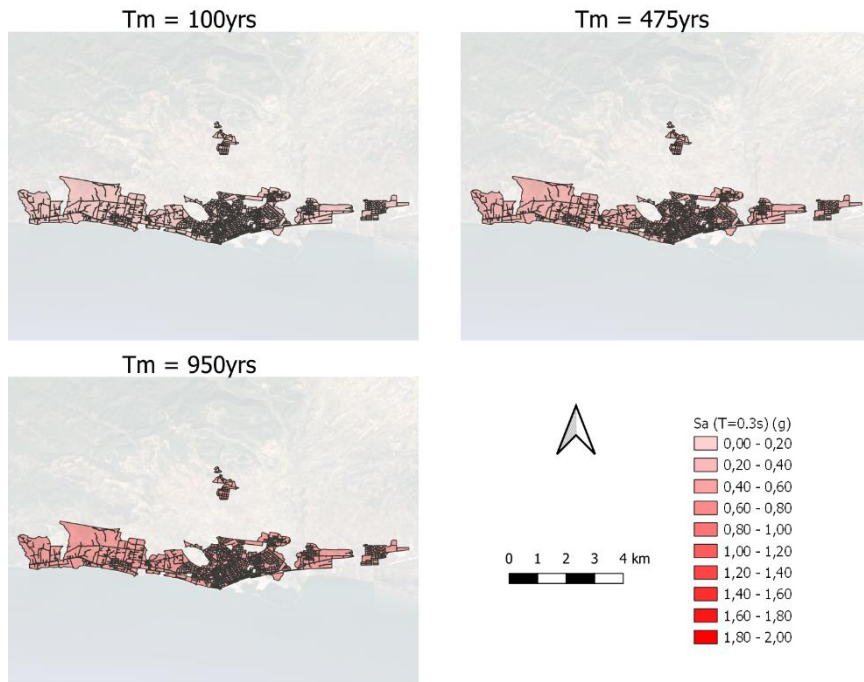


Figure 47. PSHA results for the Alexandroupolis pilot site. Pseudo Spectral Acceleration for period equal to 0.3s ($S_{a,T=0.3}$), for return periods 100, 475 and 950yrs.

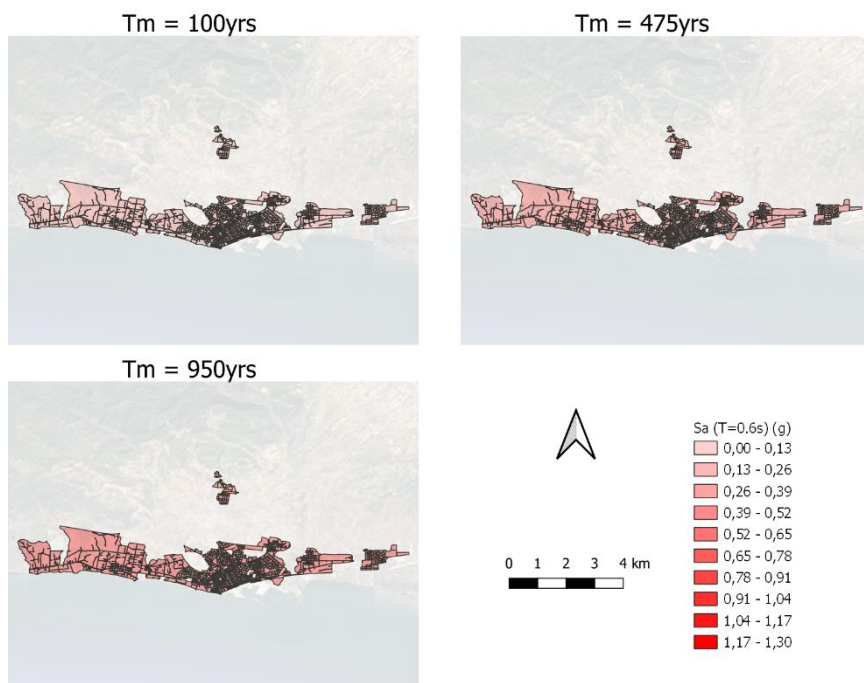


Figure 48. PSHA results for the Alexandroupolis pilot site. Pseudo Spectral Acceleration for period equal to 0.6s ($S_{a,T=0.6}$), for return periods 100, 475 and 950yrs.

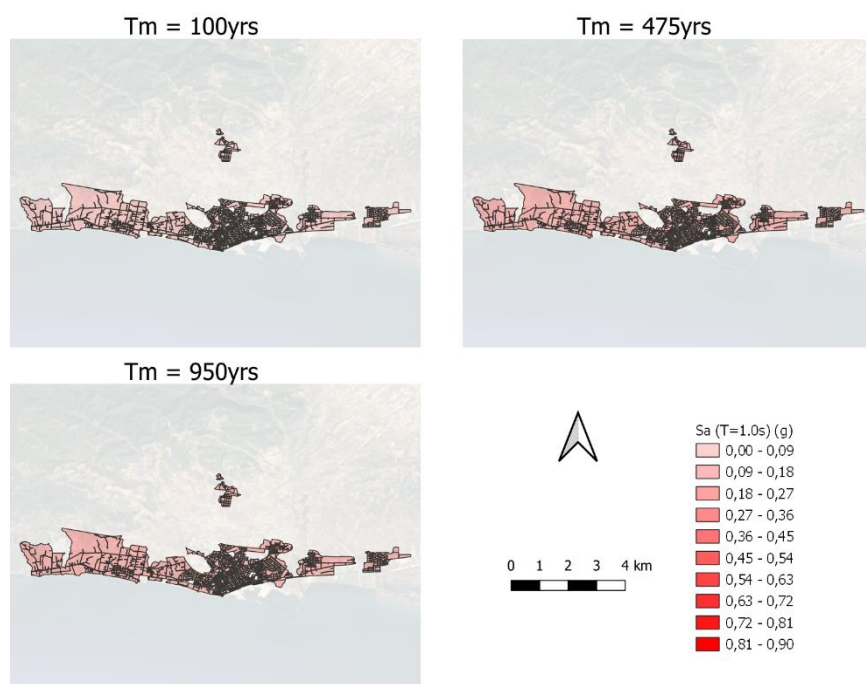


Figure 49. PSHA results for the Alexandroupolis pilot site. Pseudo Spectral Acceleration for period equal to 1.0s ($S_{a,T=1.0}$), for return periods 100, 475 and 950yrs.

3.1.2.2 Deterministic seismic hazard assessment

Figure 50 and Figure 51 present the DSHA results for the Alexandroupolis pilot site, as estimated in Deliverable D2.2 of the current project. The ranges of the acceleration values are summarized in Table 3. It is noted that the near-field Maronia-Alexandroupolis fault results in very high acceleration values therefore extensive damage in the Alexandroupolis municipality for this scenario, as presented in more detail in section 3.1.3.

Table 3. Spectral acceleration ranges of DSHA results for the Alexandroupolis pilot site.

	Maronia-Alexandroupolis	NAF-Ganos
PGA	0.442-0.759g	0.066-0.114g
Sa (T=0.3s)	0.923-1.774g	0.112-0.241g
Sa (T=0.6s)	0.678-1.553g	0.086-0.207g
Sa (T=1.0)	0.344-0.968g	0.047-0.123g

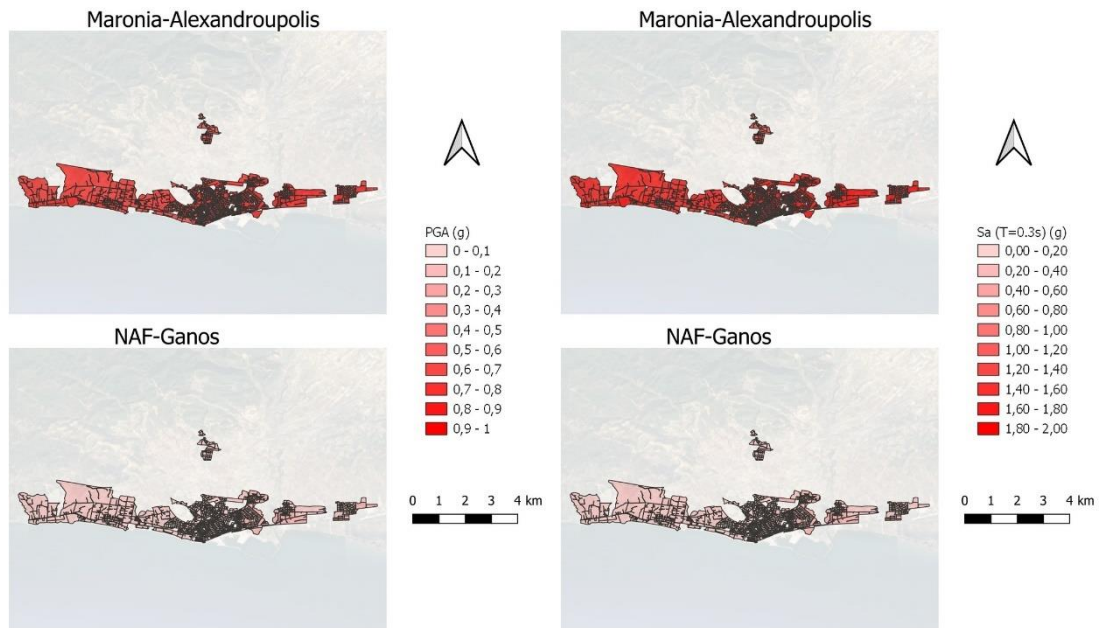


Figure 50. DSHA results for the Alexandroupolis pilot site. PGA and $S_{a,T=0.3}$ for the Maronia-Alexandroupolis and the NAF-Ganos cases.

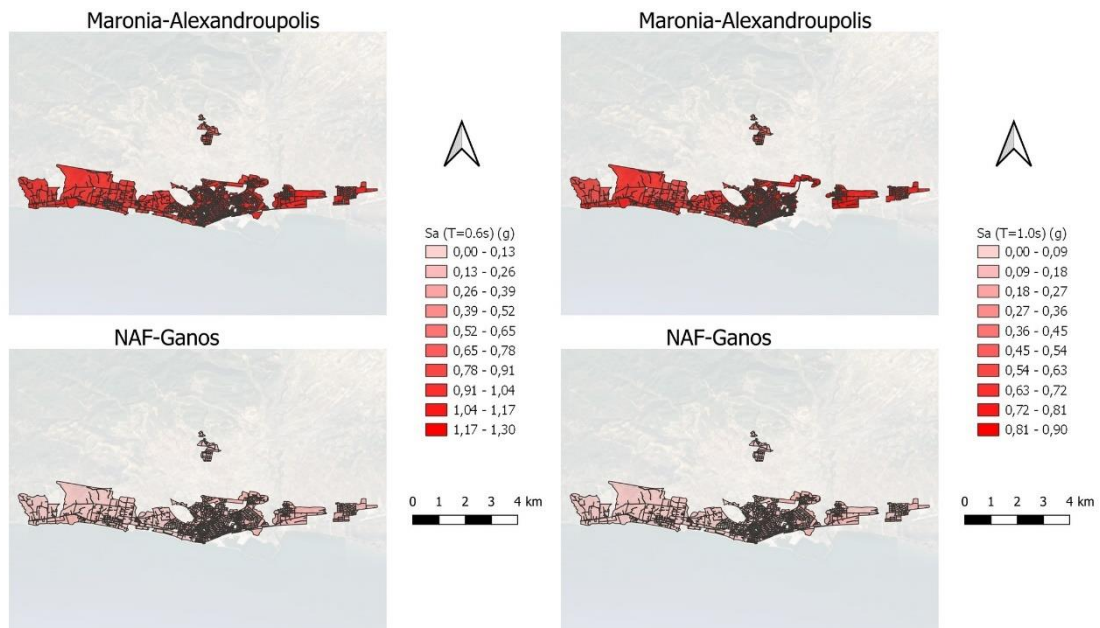


Figure 51. DSHA results for the Alexandroupolis pilot site. $S_{a,T=0.6}$ and $S_{a,T=1.0}$ for the Maronia-Alexandroupolis and the NAF-Ganos cases.

3.1.3 Damage estimation

For the damage estimation of the school buildings in Alexandroupolis, the fragility curves proposed by Martins & Silva (2021) were used for the main series of analyses with some extra ones were carried out where the ESRM2020 (2019) set was tested, as described in section 2. In the methodology used, four distinct damage states are defined for the buildings (slight, moderate, extensive and complete damage). In the following, the corresponding results for the five different seismic hazard scenarios taken into account (see §3.1.2) are presented, as evaluated through the use of the REDAS software.

In Figures 52-54, the number of school buildings per GEM typology (see Figure 42 and related text in §3.1.1) and damage state in the city of Alexandroupolis for the three probabilistic seismic hazard (PSHA) scenarios (mean return periods of $T_m=100$, 475 and 950 years) are presented.

The corresponding figures for the two deterministic seismic hazard (DSHA) scenarios, namely Maronia-Alexandroupolis and NAF-Ganos, are presented in Figure 55 and Figure 56, respectively.

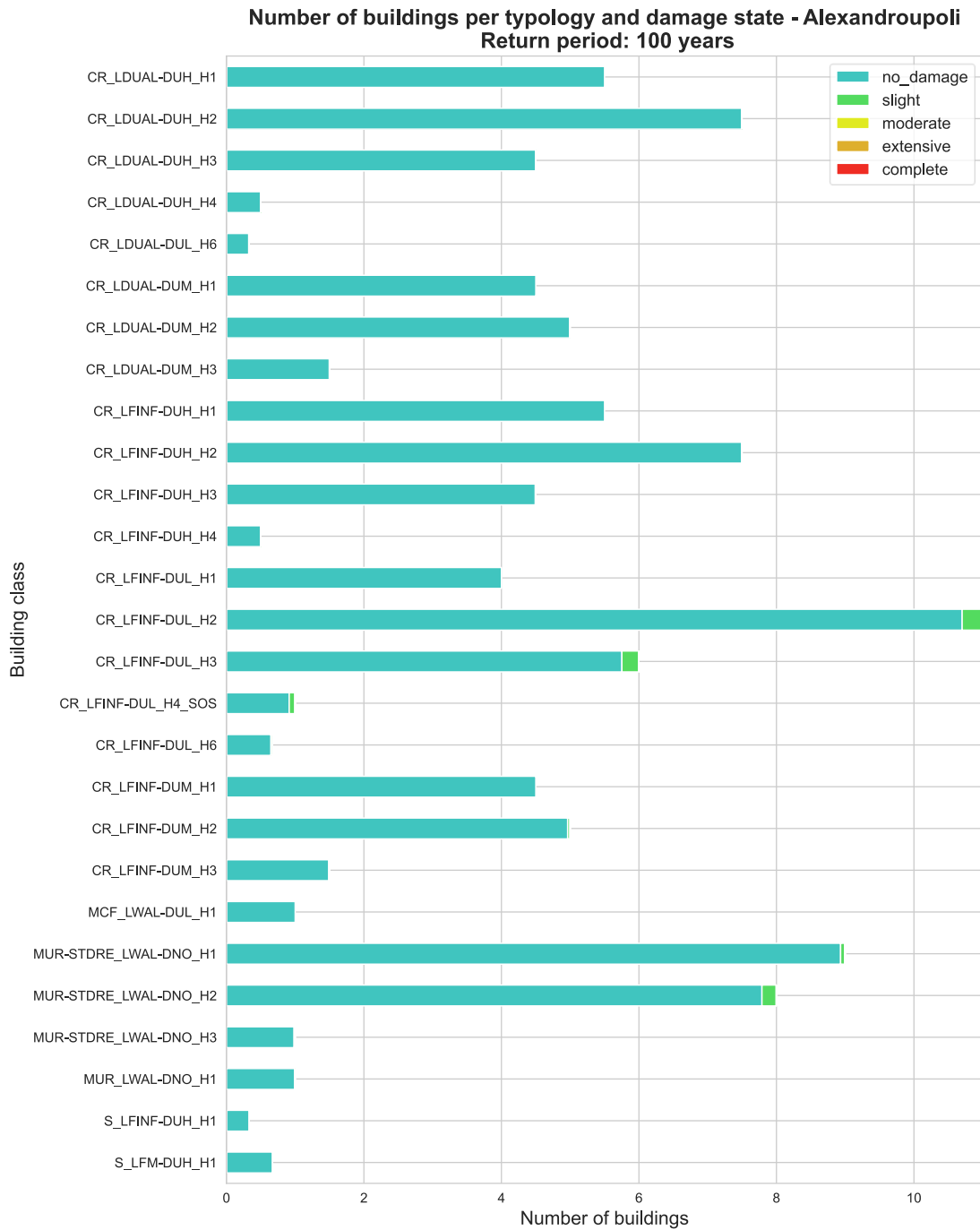


Figure 52. Number of school buildings per GEM typology and damage state in the city of Alexandroupolis for PSHA scenario with $T_m=100$ yrs.

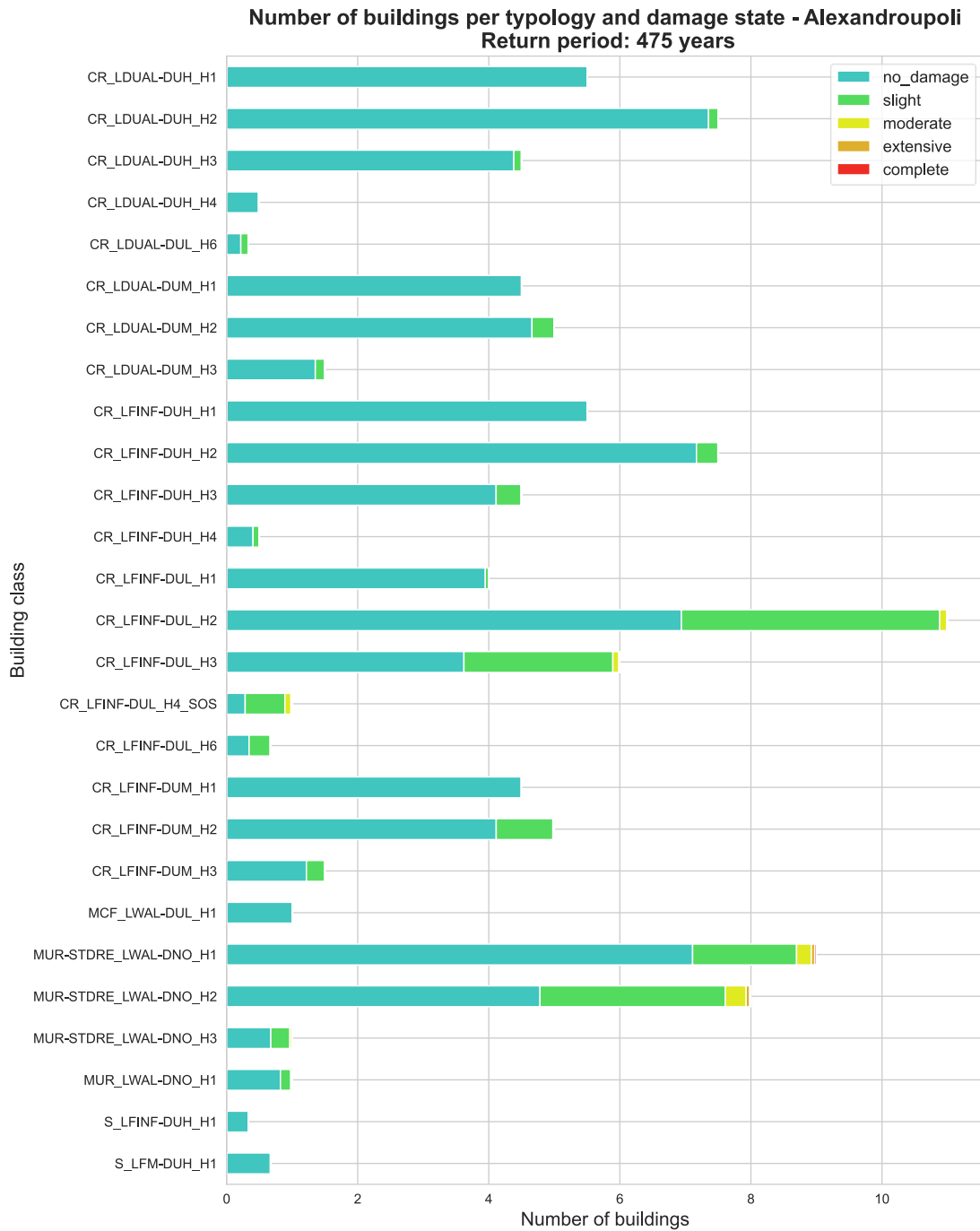


Figure 53. Number of school buildings per GEM typology and damage state in the city of Alexandroupolis for PSHA scenario with $T_m=475$ yrs.

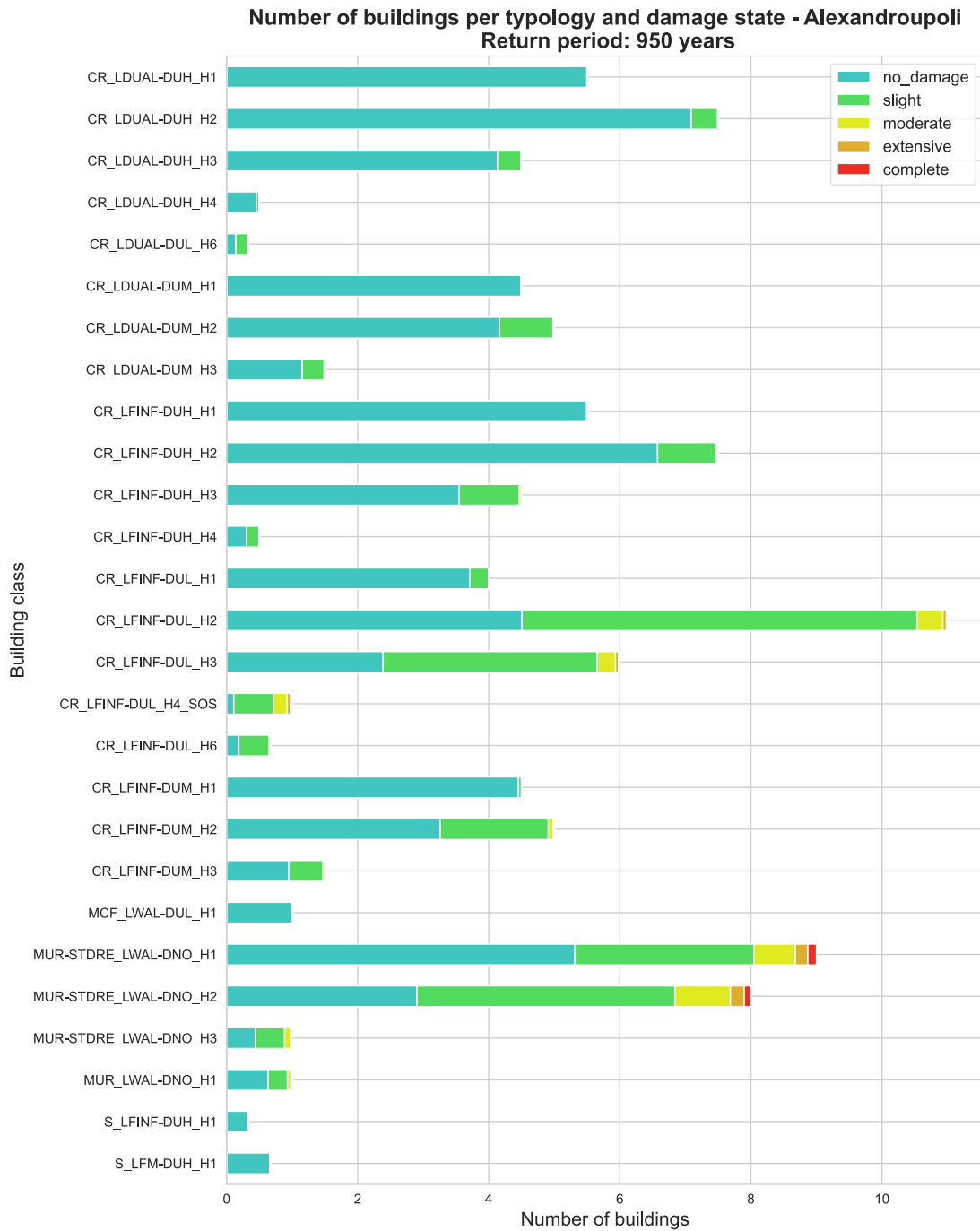


Figure 54. Number of school buildings per GEM typology and damage state in the city of Alexandroupolis for PSHA scenario with $T_m=950$ yrs.

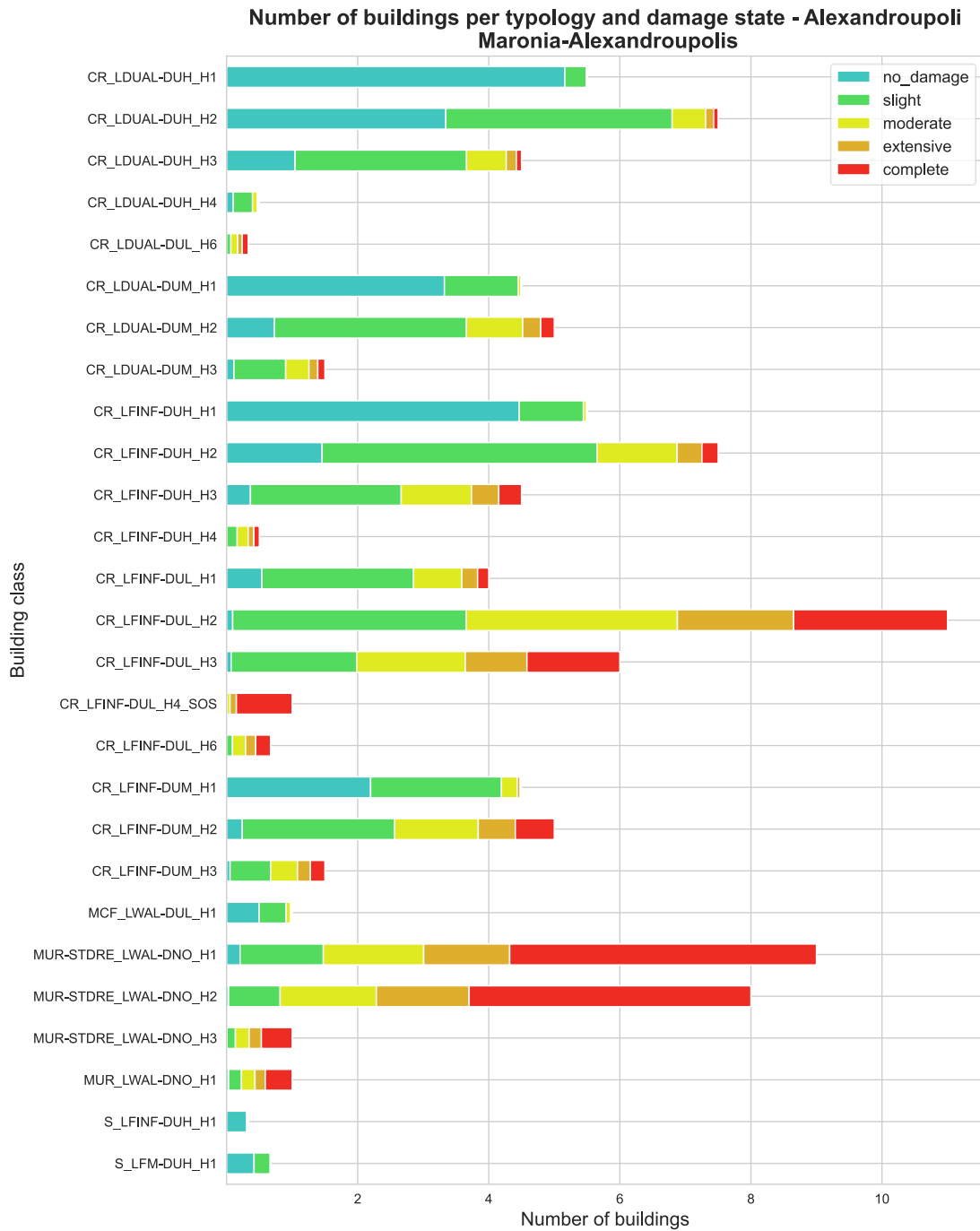


Figure 55. Number of school buildings per GEM typology and damage state in the city of Alexandroupolis for the DSHA scenario of the Maronia-Alexandroupolis fault.

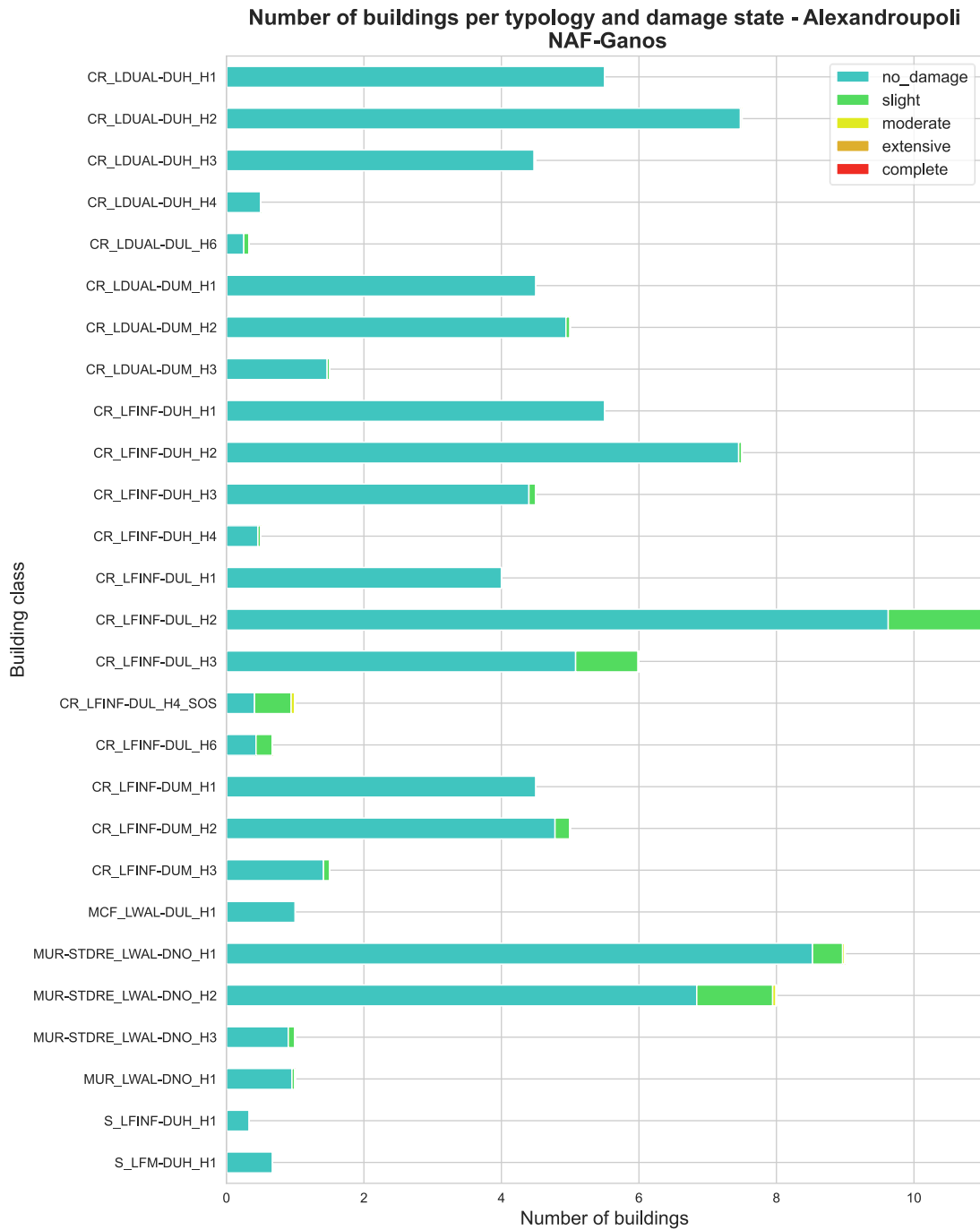


Figure 56. Number of school buildings per GEM typology and damage state in the city of Alexandroupolis for the DSHA scenario of the NAF-Ganos fault.

The spatial damage state distribution for school buildings in Alexandroupolis for the three PSHA scenarios (mean return periods of $T_m=100$, 475 and 950 years) are presented in Figures 57-59.

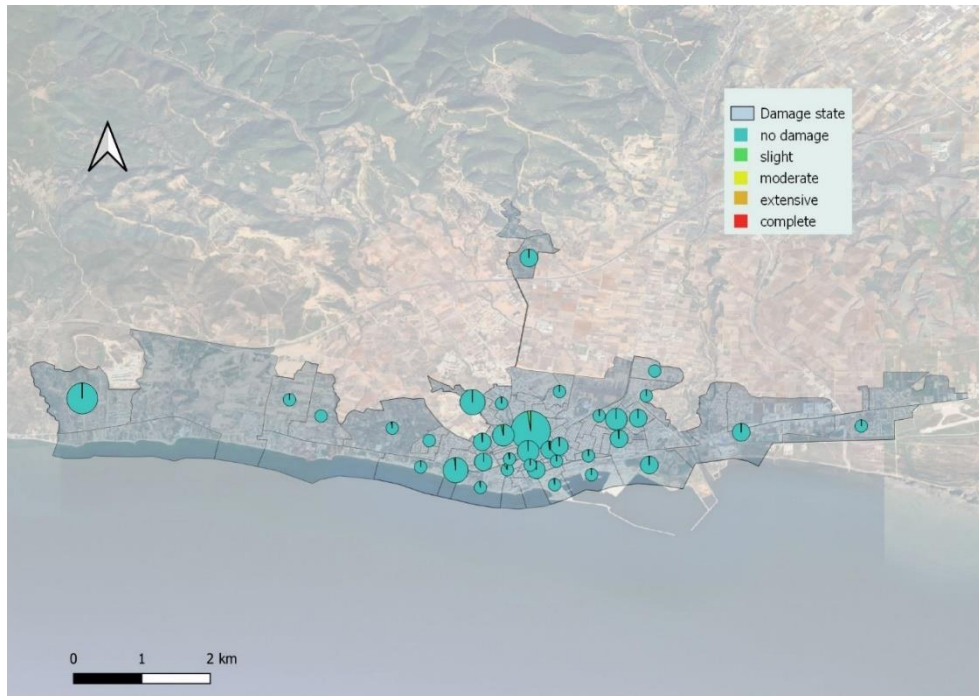


Figure 57. Spatial damage state distribution for school buildings in Alexandroupolis for PSHA scenario with $T_m=100$ yrs.

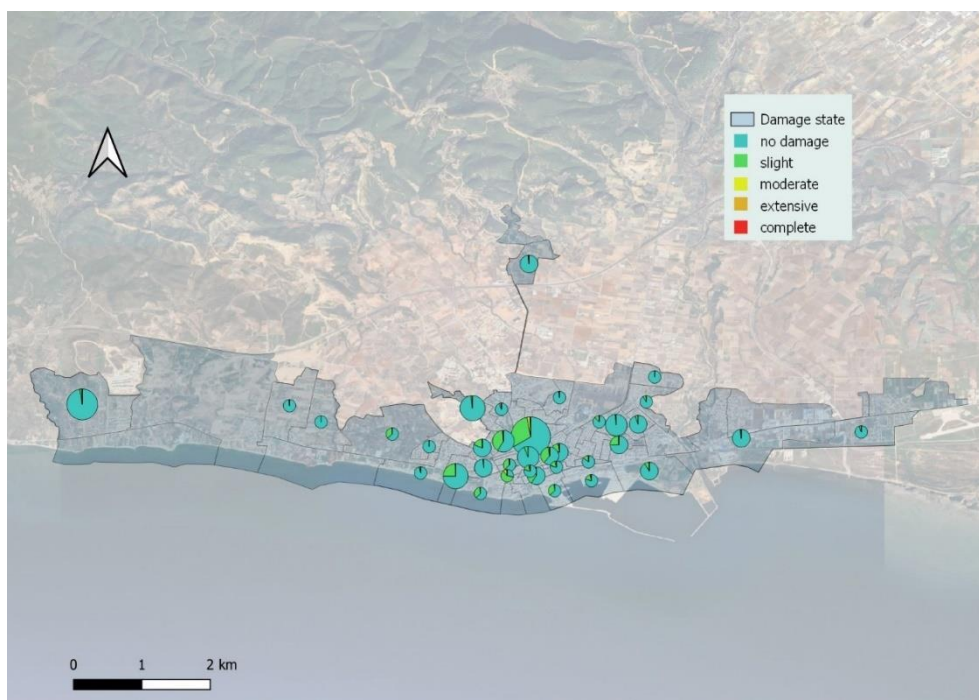


Figure 58. Spatial damage state distribution for school buildings in Alexandroupolis for PSHA scenario with $T_m=475$ yrs.

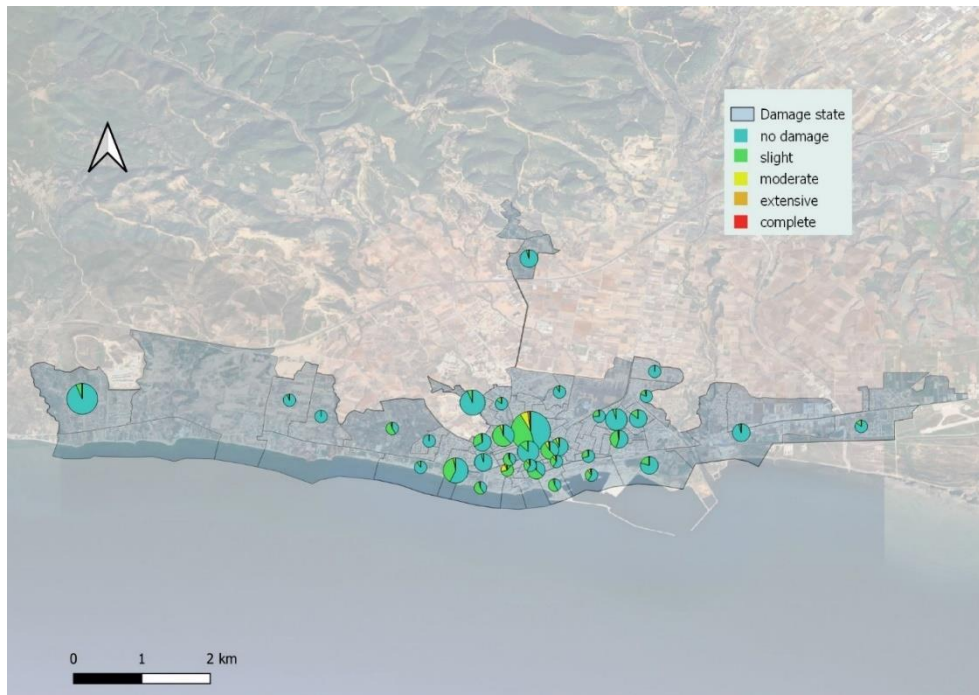


Figure 59. Spatial damage state distribution for school buildings in Alexandroupolis for PSHA scenario with $T_m=950$ yrs.

The corresponding figures for the two deterministic seismic hazard (DSHA) scenarios, namely Maronia-Alexandroupolis and NAF-Ganos, are presented in Figure 60 and Figure 61, respectively.

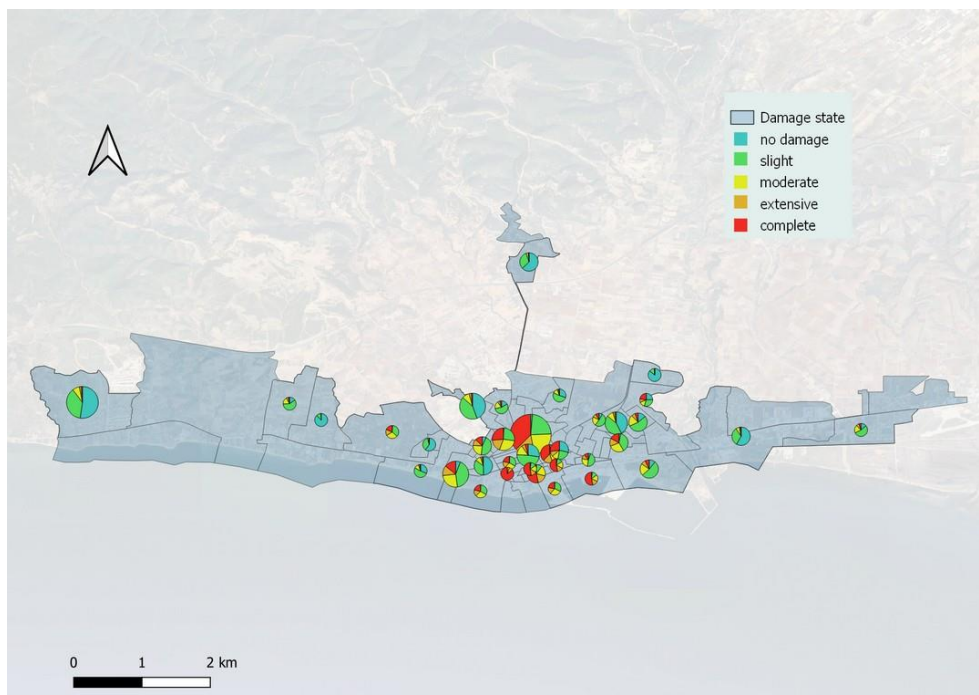


Figure 60. Spatial damage state distribution for school buildings in Alexandroupolis for the DSHA scenario of the Maronia-Alexandroupolis fault.

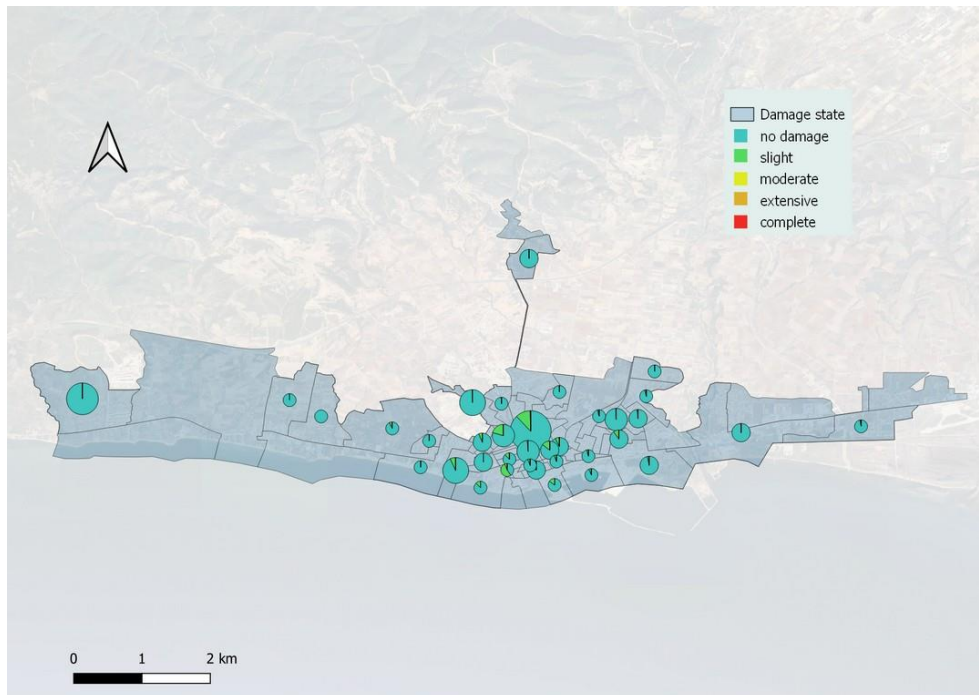


Figure 61. Spatial damage state distribution for school buildings in Alexandroupolis for the DSHA scenario of the NAF-Ganos fault.

Finally, the spatial mean damage factor distribution for school buildings in Alexandroupolis for the three PSHA scenarios (mean return periods of $T_m=100$, 475 and 950 years) are presented in Figures 62-64.



Figure 62. Spatial mean damage factor distribution for school buildings in Alexandroupolis for PSHA scenario with $T_m=100$ yrs.



Figure 63. Spatial mean damage factor distribution for school buildings in Alexandroupolis for PSHA scenario with $T_m=475$ yrs.



Figure 64. Spatial mean damage factor distribution for school buildings in Alexandroupolis for PSHA scenario with $T_m=950$ yrs.

The corresponding figures for the two deterministic seismic hazard (DSHA) scenarios, namely Maronia-Alexandroupolis and NAF-Ganos, are presented in Figure 60 and Figure 61, respectively.

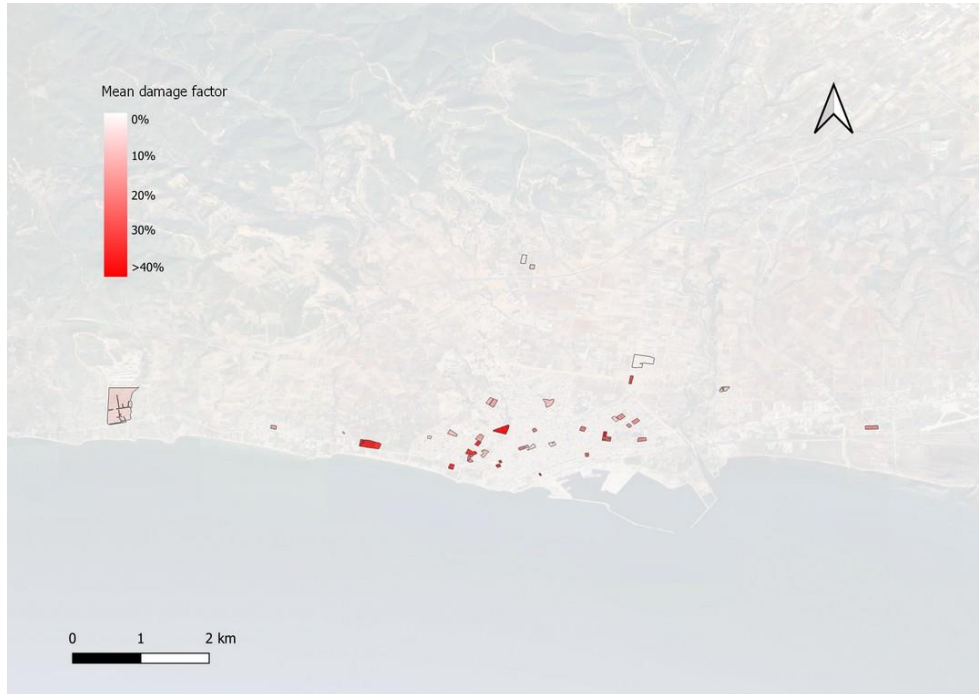


Figure 65. Spatial mean damage factor distribution for school buildings in Alexandroupolis for the DSHA scenario of the Maronia-Alexandroupolis fault.



Figure 66. Spatial mean damage factor distribution for school buildings in Alexandroupolis for the DSHA scenario of the NAF-Ganos fault.

Table 4. Mean and maximum values of the mean damage factor (MDF) for school buildings in the building blocks in the Alexandroupolis pilot site.

	Scenario	Mean MDF	max MDF
PHSA	Tm=100yrs	0.1%	0.4%
	Tm=475	1.1%	6.1%
	Tm=950yrs	2.4%	12.6%
DHSA	Maronia-Alexandroupolis	26.7%	91.9%
	NAF-Ganos	0.4%	4.2%

3.1.4 Discussion

The risk assessment of the school building stock in the Alexandroupolis pilot site resulted in relatively low damage for the probabilistic scenarios with return periods of 100 and 475 years, as well as the deterministic scenario for the NAF-Ganos fault, in agreement with the relatively low seismicity of the area which is assigned to Zone I according to the seismic hazard map of the current Greek codes (Eurocode 8 and EAK2000) and the accelerations derived for these scenarios in the deliverable D3.2 of the current research project.

For the PHSA scenario with a return period of 950 years, slight to moderate damage is anticipated in a significant number of school buildings, particularly older ones constructed with stone masonry or reinforced concrete designed according to outdated seismic codes or even without any seismic provisions.

The DHSA scenario for the Maronia-Alexandroupolis fault - which could be considered as an extreme scenario - indicates very extensive damage to the school buildings in the pilot site, with a significant number of expected collapses. This 'Near-Field' seismic source generates exceptionally high acceleration values (e.g., peak ground acceleration ranges from 0.442g to 0.759g; see Table 3) leading to severe damage across the building stock in Alexandroupolis. This rather extreme scenario underscores the potential for a high-magnitude earthquake with severe consequences, even in areas with generally low seismicity but with active faults that have not produced strong earthquakes in recent history. Therefore, enhancing the seismic resistance of the building stock is crucial for ensuring the safety of the population, particularly in sensitive buildings such as schools.

3.2 SAMOS

3.2.1 School building stock

Extensive data regarding the school buildings in the city Samos have been obtained by the Hellenic Statistical Authority (ELSTAT) based on the 2011 National Census, since the 2021 data are not available, yet. In total, 34 school buildings were identified in the area.

An additional source of data was obtained by Ktiriakes Ypodomes S.A. (KT.YP.) who has performed rapid visual screening on 26 school buildings in Samos, carried out by proficient structural engineers, providing a very reliable dataset for seismic risk assessment purposes. Although, some of them were located in other parts of the island, outside of the pilot site area. More details on this dataset can be found on the Deliverable D3.1 of the current project.

Unfortunately, no blueprints and/or detailed building design studies of the school buildings were available in the Samos case.

The distribution of school building stock located in the Vathy area is depicted in the map of Figure 67.

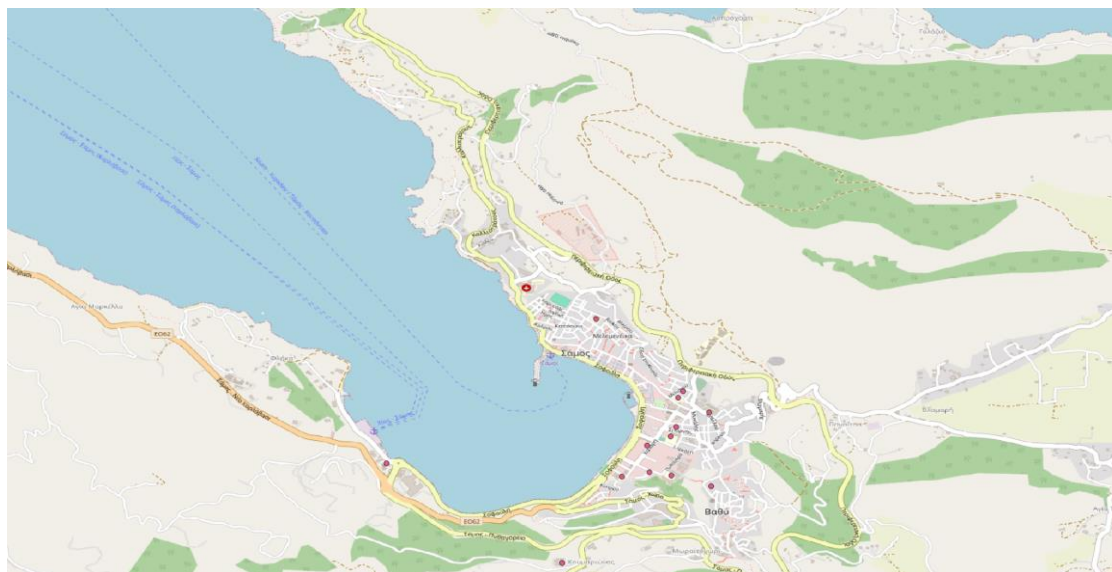


Figure 67. City of Vathy at Samos with school building stock distribution highlighted in GIS.

In the case of Vathy at Samos the original ELSTAT data comprised twenty five (25) buildings that were further enriched with data available from KT.YP., arriving in the total number of 34 distinct school buildings.

The main properties of the school buildings that affect their seismic performance and are available in this dataset are presented in Figure 68.

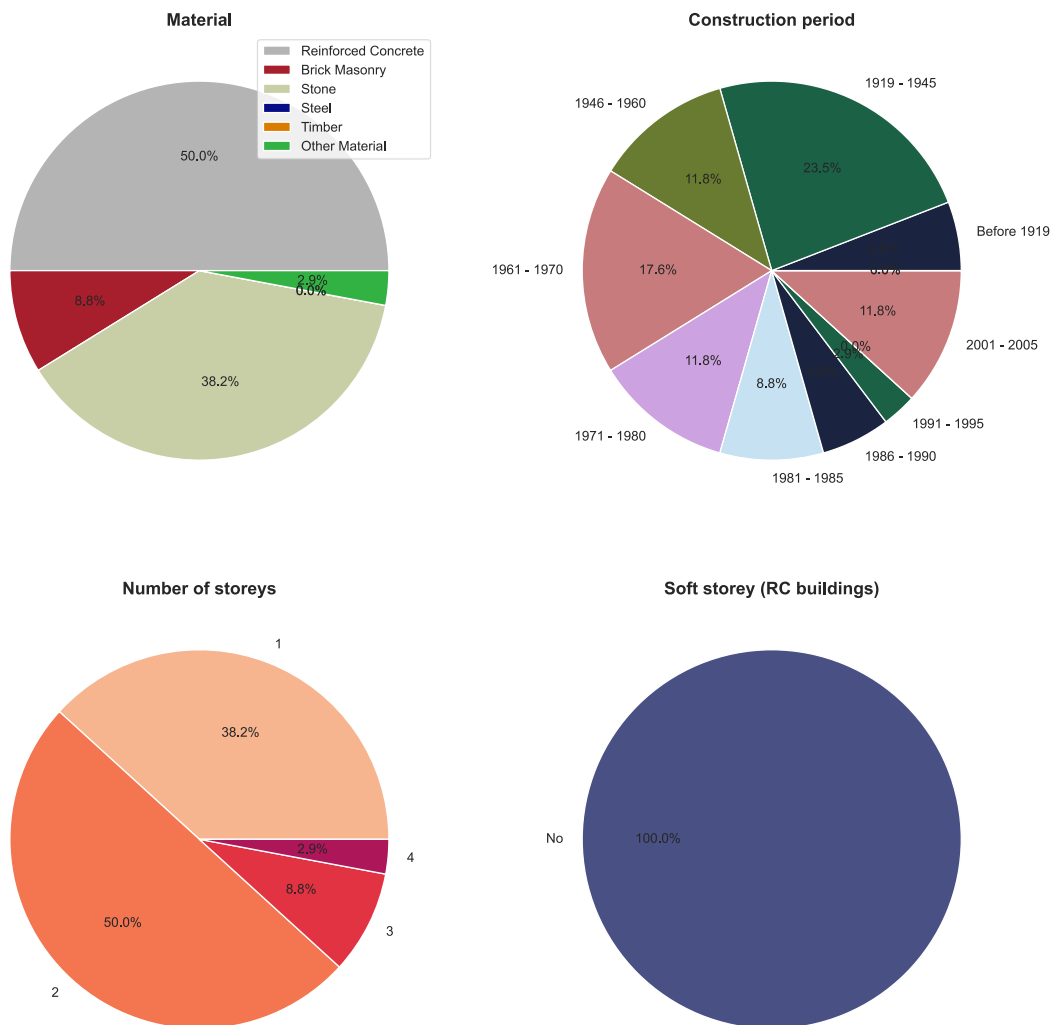


Figure 68. Main structural properties of the school buildings in the city of Samos

The majority of the school buildings (50.0%) in Samos consist of RC buildings, followed by stone masonry (38.2%) and brick masonry (8.8%) ones. Other material types (steel, wood etc) make up the remaining 2.9%. Regarding the construction period (and hence the respective Seismic Code each building adheres to), it is found that 41.2% were built prior to 1959 with no Code provisions, 38.2% between 1960-1985 (according to 1959 Seismic Code), 8.8% between 1986-1995 (according to the updated in 1985 Seismic Code of 1959), while the remaining 11.8% were built after 1995, according to modern Greek Seismic Codes (NEAK, EAK2000, EC8). The vast majority (97.0%) of the

buildings are low-rise (1-3 storeys), with higher (4-6 storeys) buildings consisting the remaining 3%. No school has a ground floor soft story (pilotis).

In Figure 69, a detailed analysis of the height of the school buildings in Samos is shown for various time periods.

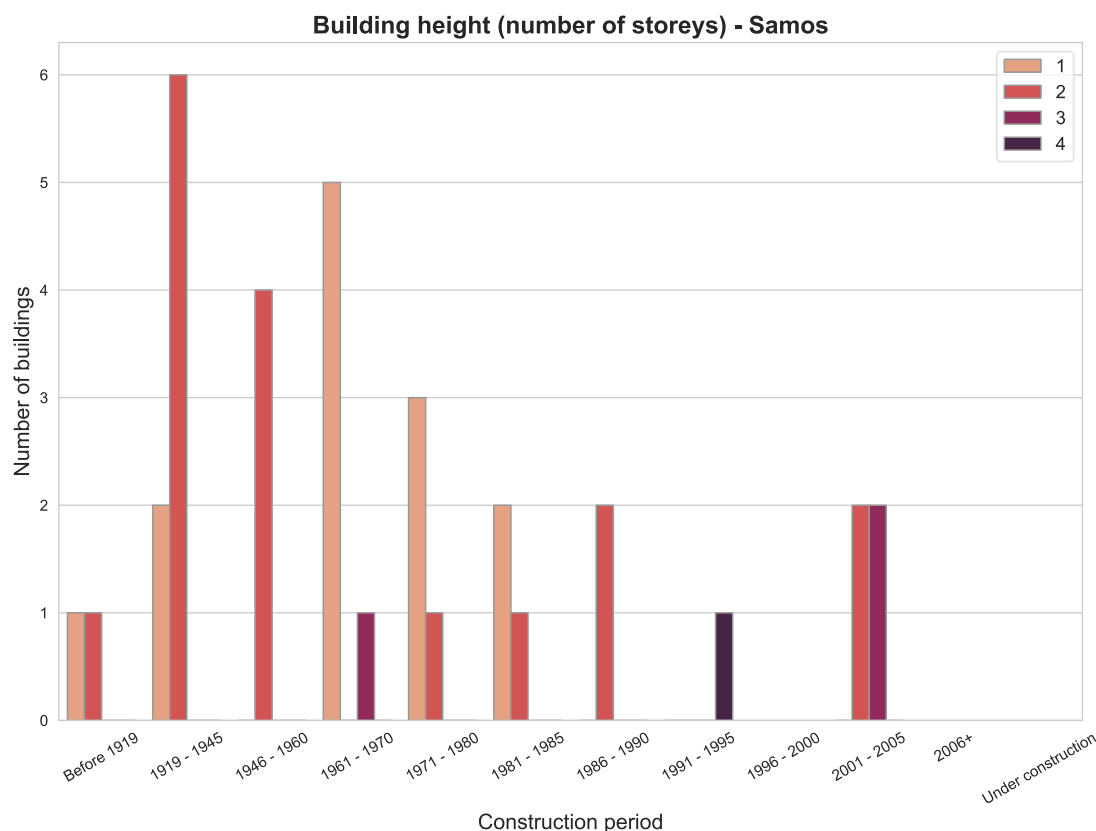


Figure 69. School building height vs construction period in the city of Samos

In Figure 70, the material used in relation to the building height (no. of storeys) is presented, with RC being in most cases (with the exception of 2-storey buildings) the material predominantly used. As expected, stone masonry is used only for low-rise (1-2 storey) school buildings. Also, materials other than RC and stone masonry are limited to 1-storey buildings.

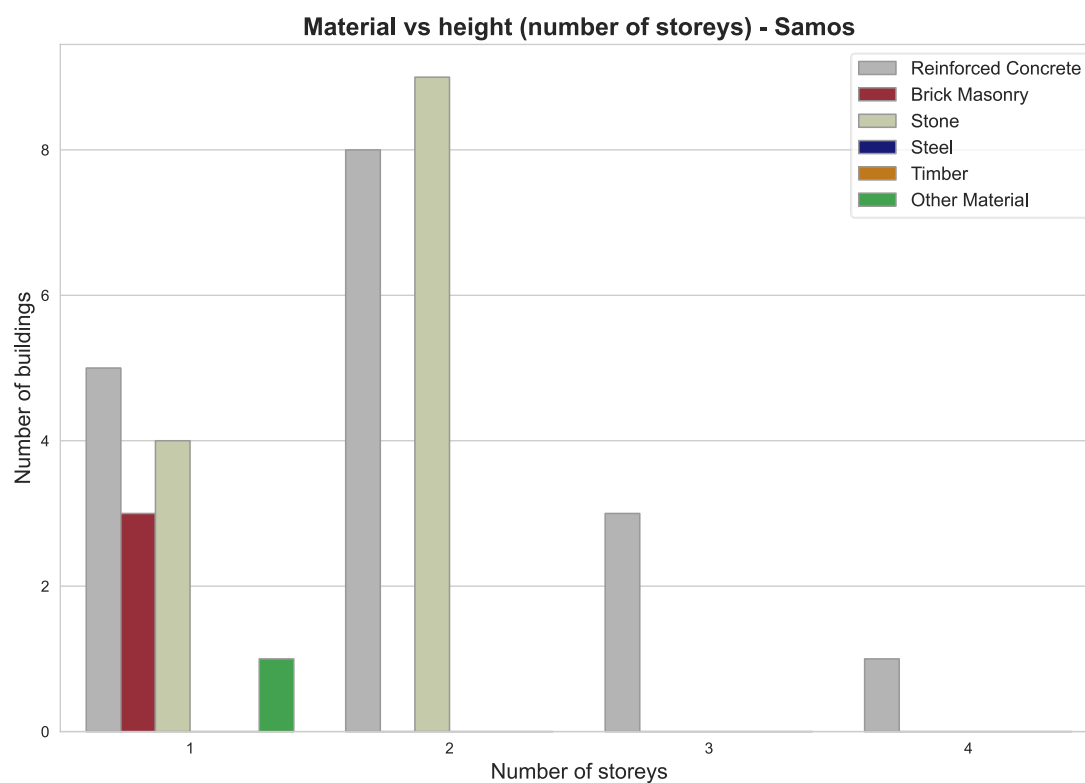


Figure 70. School building height vs construction material in the city of Samos

In Figure 71, the use of different materials in different time periods is presented for the school buildings, with stone masonry being the only material used until 1945. From 1946 onwards, RC becomes the predominant material. Brick masonry was also extensively used during the 1971-1985 period.

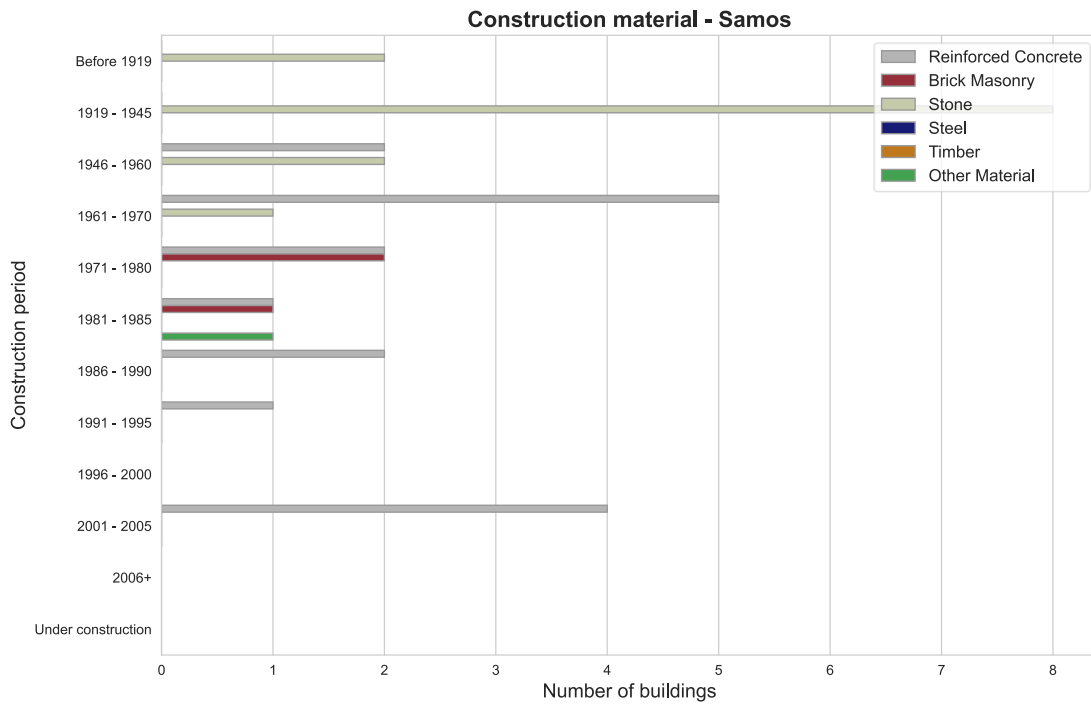


Figure 71. School building material vs construction period in the city of Samos

As already noted in Figure 68, no soft ground storey is found in school buildings of the city of Samos (Figure 72).

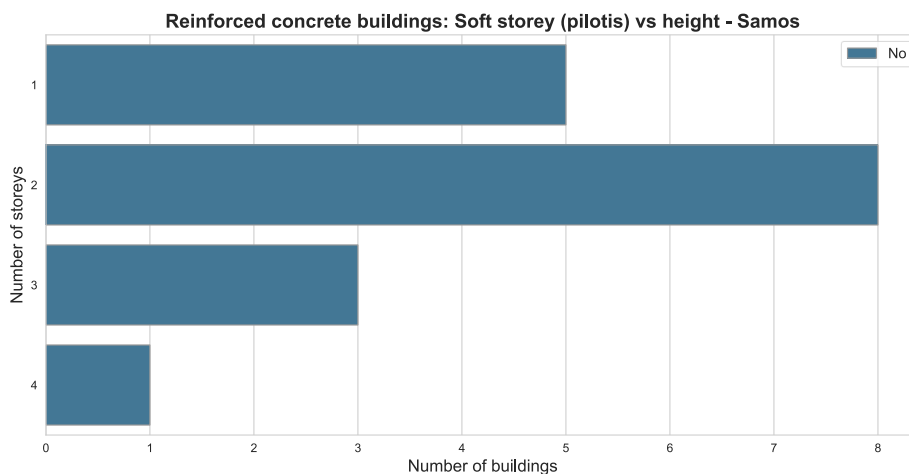


Figure 72. Soft storey vs school building height in the city of Samos

All school buildings in the city of Samos were assigned to the GEM taxonomy classes (Brzev et al., 2013), for which fragility curves are available based on the study of Martins and Silva (2021). The distribution of the number of school buildings for each GEM typology is given in Figure 73. Each GEM typology is characterized through a “MAT_STRSYS_DUCT_HEIGHT_SOS” label, where MAT describes the material type, (eg. CR-Reinforced Concrete, MUR -

unreinforced masonry etc.), *STRSYS* the lateral load-resisting system or material technology (e.g. in case of CR buildings LFINF - infilled frame, LWAL-shear wall, LDUAL - mixed column and shear wall system, in case of masonry LWAL-shear wall system, STDRE - dressed stone masonry etc.), *DUCT* the ductility (DUL- low, DUM - medium, DUH - high, corresponding, regarding RC buildings, to the 1959, 1985 and 1995 + later Greek Seismic Codes respectively and DNO - Non Ductile, regarding mainly masonry buildings), *HEIGHT* the number of storeys (H4 - 4 storeys), and *SOS* denotes the existence of a soft storey. A detailed description of the GEM building taxonomy can be found in (Brzev et al., 2013).

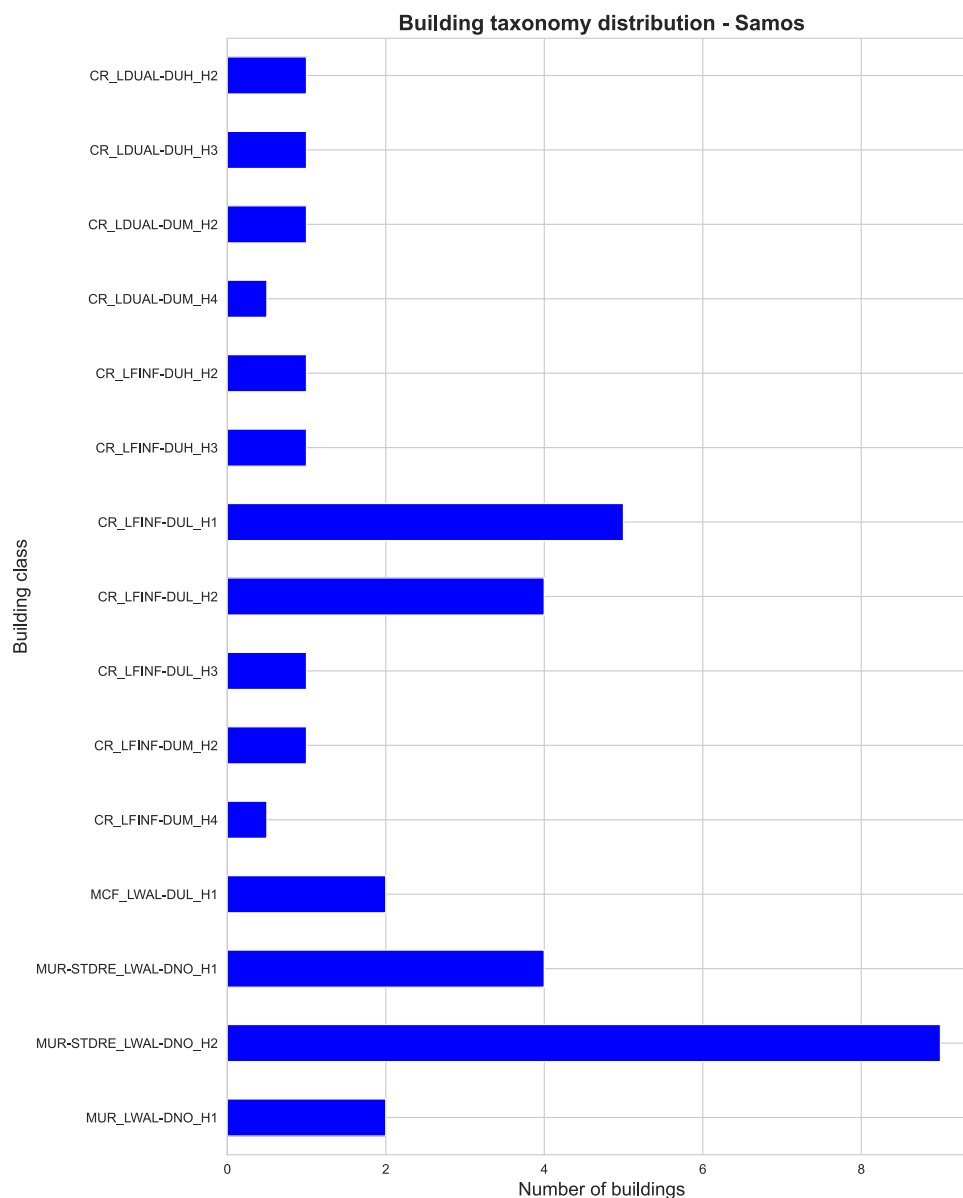


Figure 73. School building stock taxonomy in the city of Samos

Figure 74 illustrates the spatial distribution of material types for school buildings across the various census sectors of Vathy in Samos, as defined by the 2011 ELSTAT National Census. It's important to note that all assessment analyses were conducted at the individual building level concerning structural type and at the building block level concerning seismic motion (acceleration values). The following figures are presented at the census sector level to enhance the visualization of the corresponding attributes. It is seen that in three of the five census sectors with school buildings the majority consists of stone masonry buildings, with RC buildings predominating in the rest two.

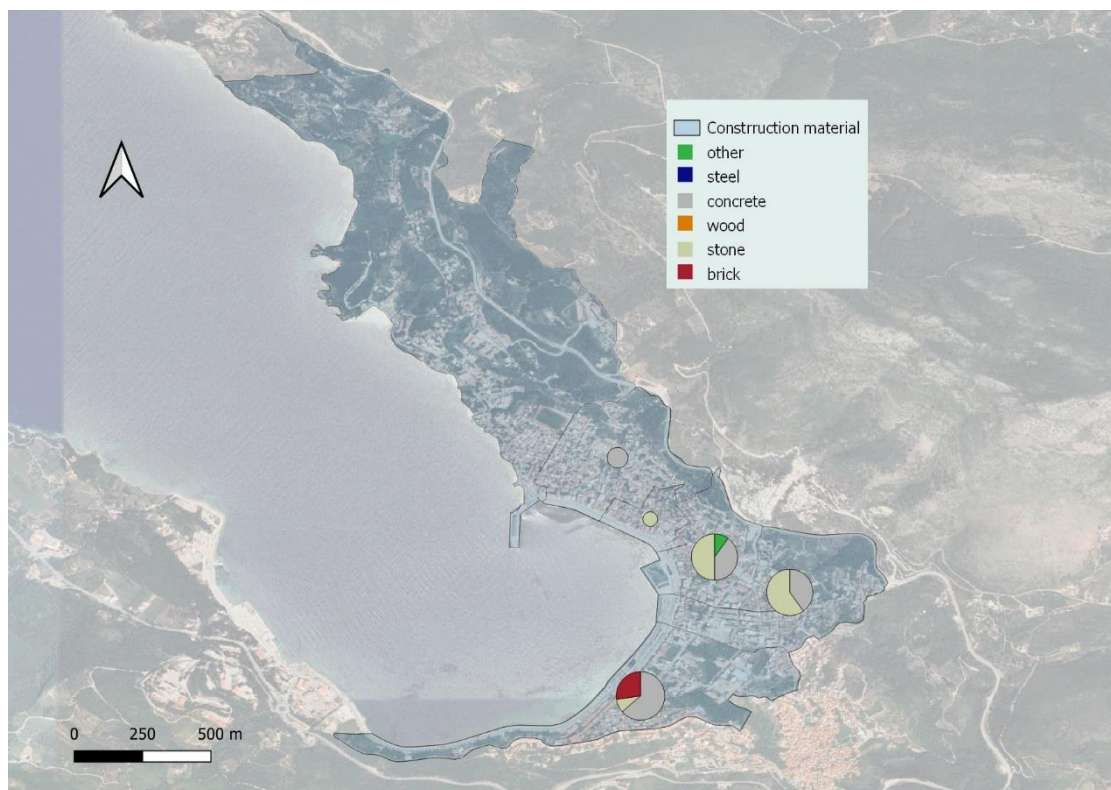


Figure 74. Spatial distribution of the material types of school buildings in the city of Samos

In Figure 75, the spatial distribution of school buildings according to their seismic code design level is presented. The buildings are classified as built prior to 1959 (with no Code provisions), between 1960-1985 (according to 1959 Seismic Code), between 1986-1995 (according to the updated 1959 Seismic Code), and after 1995, according to modern Greek Seismic Codes (NEAK, EAK2000, EC8).

Finally, in Figure 76 presents the spatial distribution of the height of school buildings (no. of storeys) for the city of Samos.

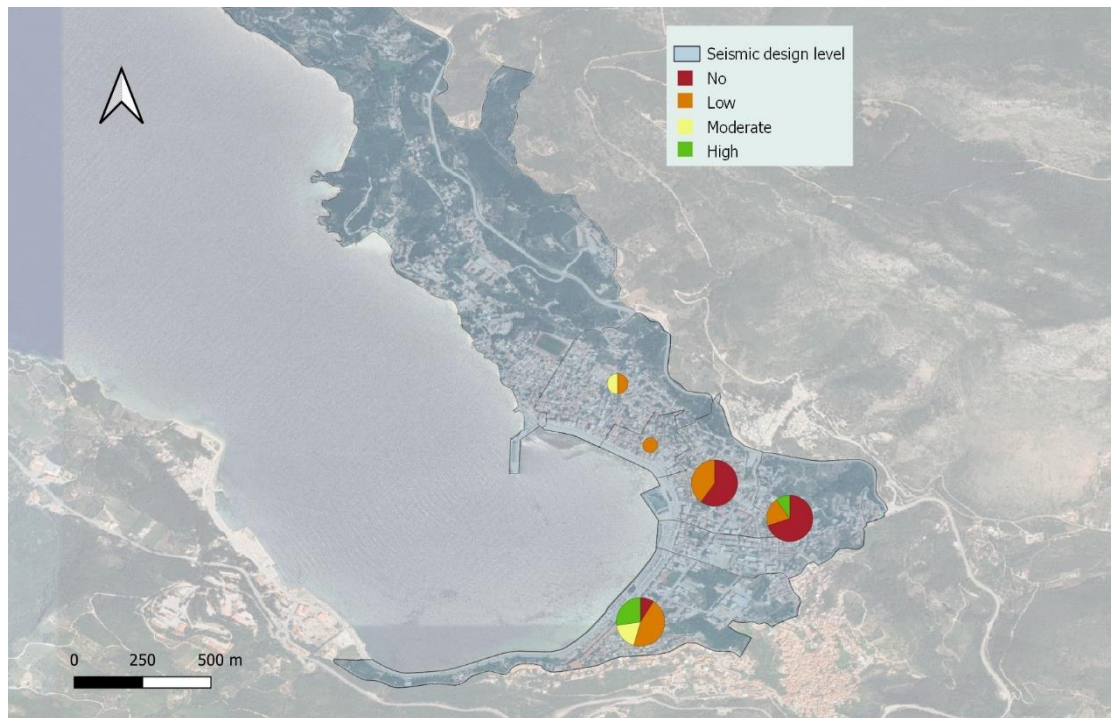


Figure 75. Spatial distribution of the seismic design level of school buildings in the city of Samos (No: <1959, Low: 1960–1984, Moderate: 1985–1995, High: >1996)

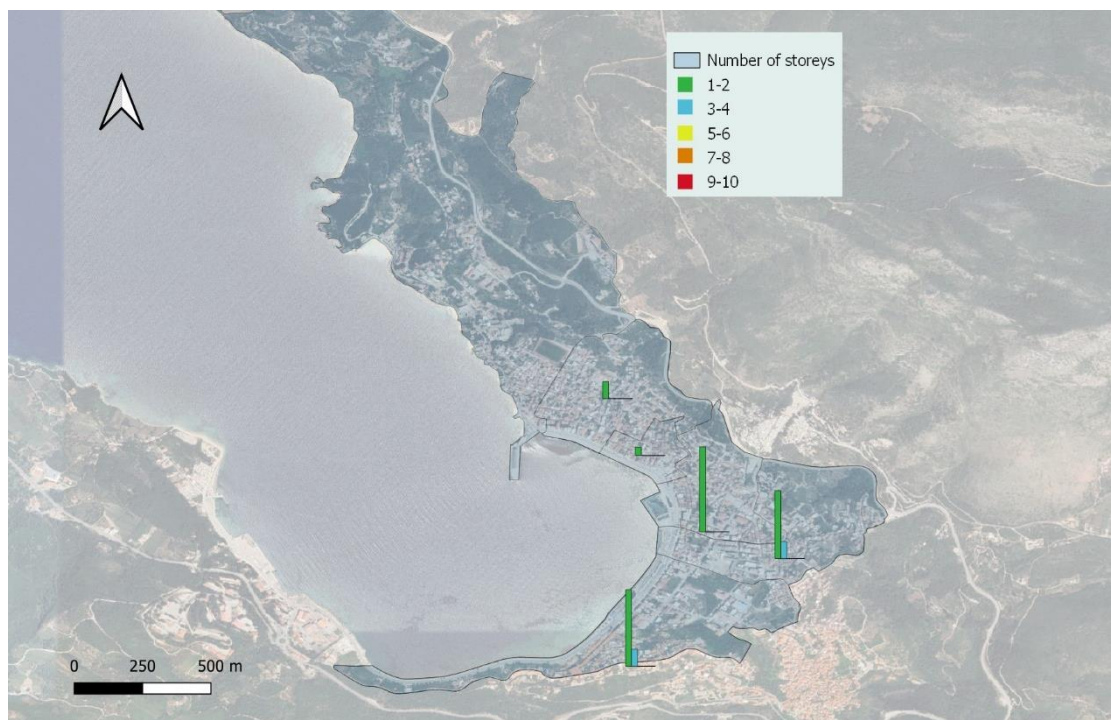


Figure 76. Spatial distribution of the height of school buildings in the city of Samos

While the primary focus of this research effort is on the seismic risk of school buildings, a preliminary indicative assessment was also conducted for the entire building stock in the pilot area of Samos. This assessment was based on readily available structural data from the ELSTAT dataset during the EReS project implementation period.

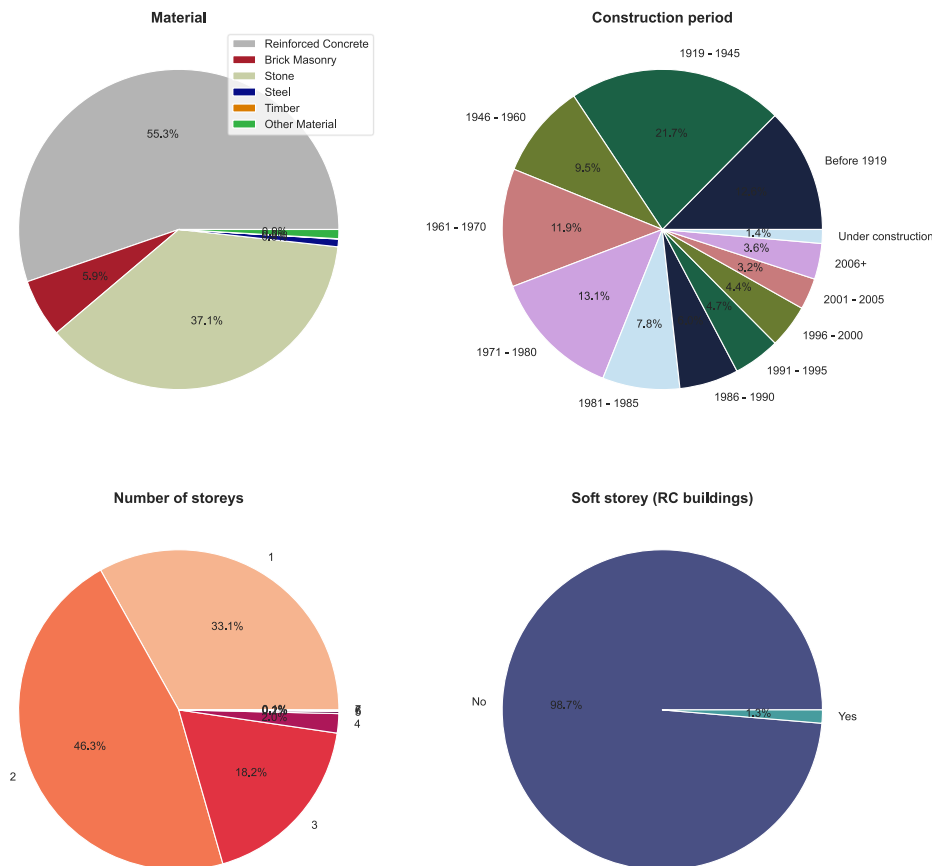


Figure 77. Summary of structural properties of the total building stock, including school buildings, in the city of Samos

The majority of the building stock in Samos consist of RC buildings, followed by stone masonry and brick masonry ones while other material types (steel, wood etc.) are less common. Regarding the construction period (and hence the respective Seismic Code each building adheres to), it is found that more than 43.8% were build prior to 1959 with no Code provisions, 32.8% between 1960-1985 (according to 1959 Seismic Code), 10.7% between 1986-1995 (according to the updated in 1985 Seismic Code of 1959), while the remaining 12.7% were built after 1995, according to modern Greek Seismic Codes (NEAK, EAK2000, EC8). The vast majority (>97%) of the buildings are low-rise (1-3 storeys), some mid-rise (4-6 storeys), while higher (7 or more storey) buildings are very few (0.1%). Of the total building stock, nearly 1% has a ground floor soft story (pilotis).

3.2.2 Hazard scenarios

For the damage estimation of the school buildings in Samos, five different seismic hazard scenarios are examined, which were developed within WP2.2 of current research program, and which are described in detail in Deliverable D2.2. The scenarios consist of three different probabilistic seismic hazard assessments (PSHA) properly harmonized for the Greece -Türkiye Cross Border Area (CBA), corresponding to mean return periods of $T_m=100$, 475 and 950 years, and two deterministic ones (DSHA) for the pilot area of Samos (Samos-Validation and Samos-North).

3.2.2.1 Probabilistic seismic hazard assessment

Figures 78-81 present the PSHA results for the Samos pilot site, as estimated in Deliverable D2.2 of the current project. The ranges of the acceleration values are summarized in Table 5. It should be noted that since the area of the Samos pilot site is limited and the grid of the PSHA results in D2.2 is rather large, the adoption of the nearest grid point method resulted in the same acceleration values in all of Samos area, for the probabilistic approach.

Table 5. Spectral acceleration ranges of PSHA results for the Samos pilot site.

	$T_m=100$ yrs	$T_m=475$ yrs	$T_m=950$ yrs
PGA	0.097g	0.243g	0.319g
Sa (T=0.3s)	0.177g	0.466g	0.626g
Sa (T=0.6s)	0.094g	0.256g	0.354g
Sa (T=1.0)	0.052g	0.145g	0.204g

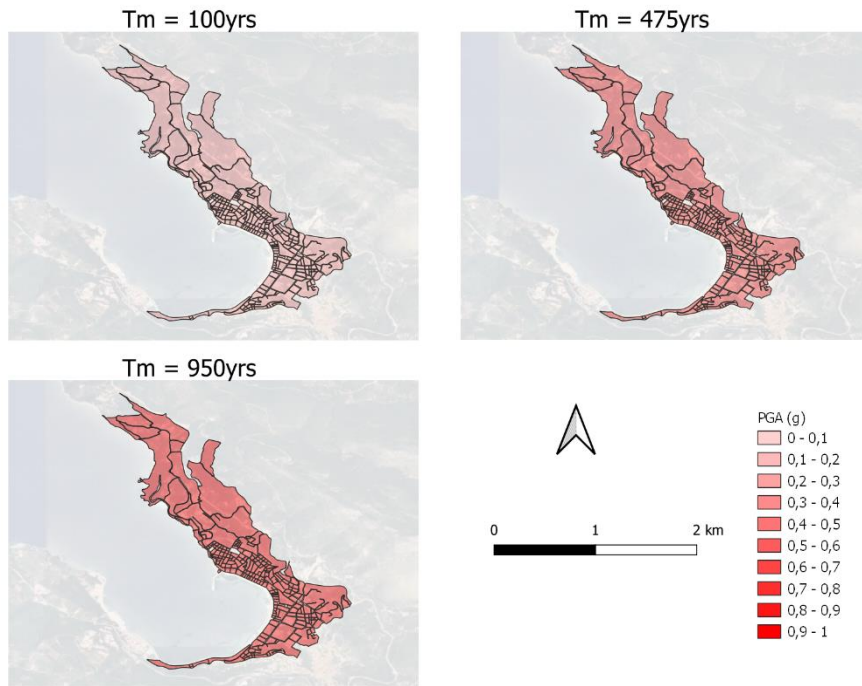


Figure 78. PSHA results for the Samos pilot site. Peak Ground Acceleration (PGA), for return periods 100, 475 and 950yrs.

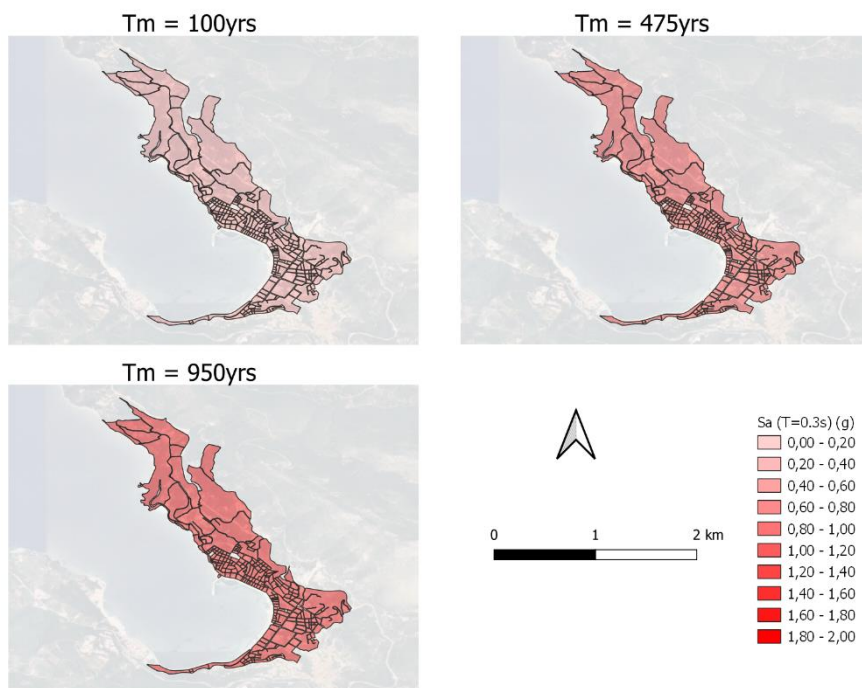


Figure 79. PSHA results for the Samos pilot site. Pseudo Spectral Acceleration for period equal to 0.3s ($S_{a,T=0.3}$), for return periods 100, 475 and 950yrs.

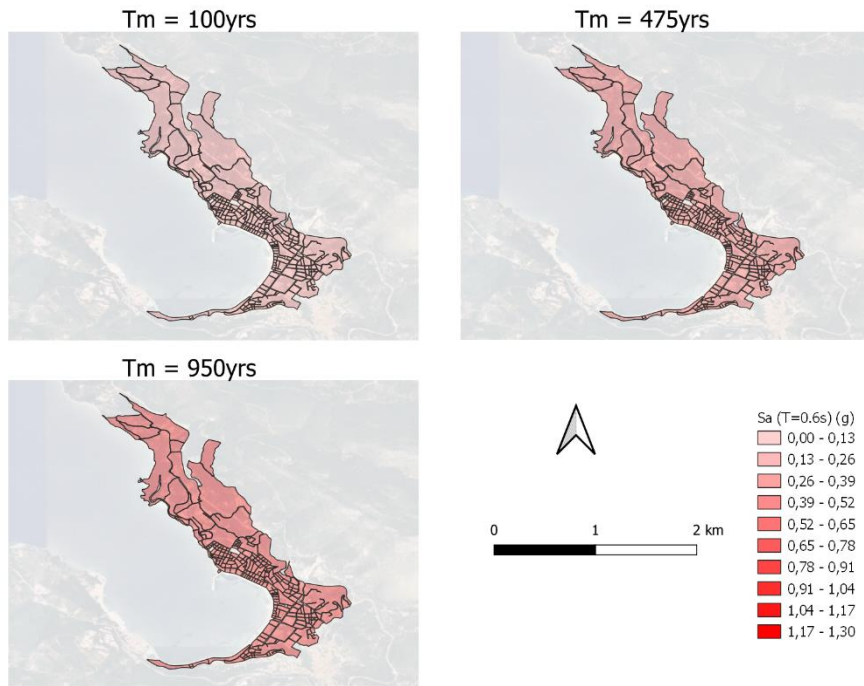


Figure 80. PSHA results for the Samos pilot site. Pseudo Spectral Acceleration for period equal to 0.6s ($S_{a,T=0.6}$), for return periods 100, 475 and 950yrs.

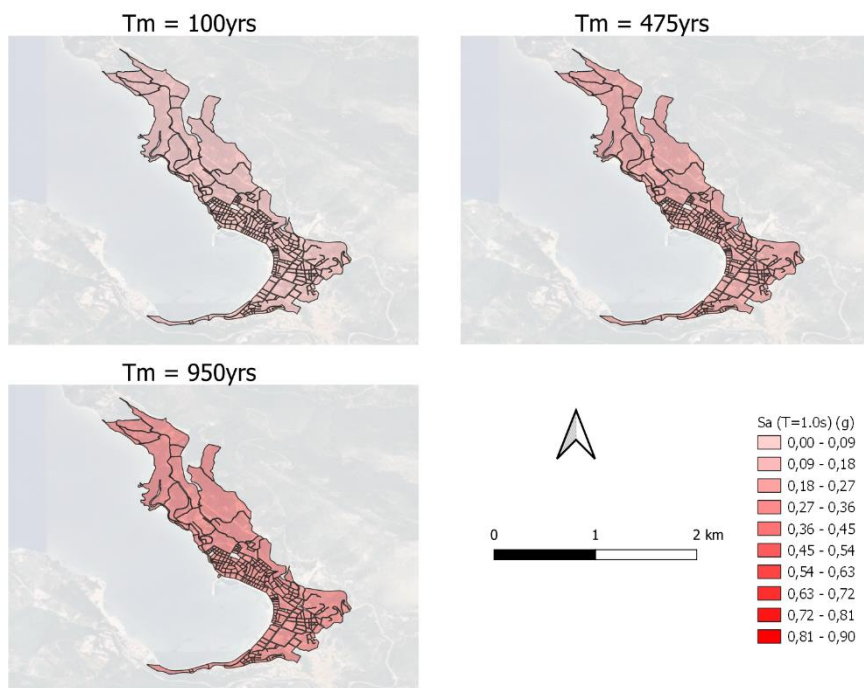


Figure 81. PSHA results for the Samos pilot site. Pseudo Spectral Acceleration for period equal to 1.0s ($S_{a,T=1.0}$), for return periods 100, 475 and 950yrs.

3.2.2.2 Deterministic seismic hazard assessment

Figure 82 and Figure 83 present the DSHA results for the Samos pilot site, as estimated in Deliverable D2.2 of the current project. The ranges of the acceleration values are summarized in Table 6.

Table 6. Spectral acceleration ranges of DSHA results for the Samos pilot site.

	Samos-Validation	Samos-North
PGA	0.169-0.252g	0.278-0.413g
Sa (T=0.3s)	0.295-0.498g	0.506-0.845g
Sa (T=0.6s)	0.201-0.365g	0.350-0.632g
Sa (T=1.0)	0.100-0.192g	0.177-0.335g

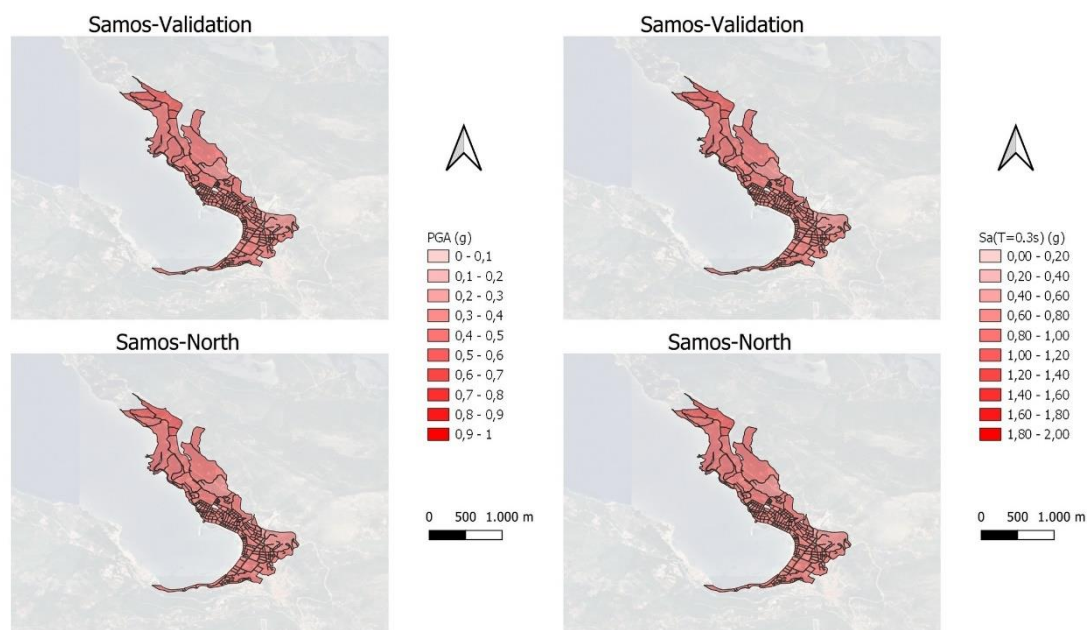


Figure 82. DSHA results for the Samos pilot site. PGA and $S_{a,T=0.3}$ for the Samos-Validation and the Samos-North cases.

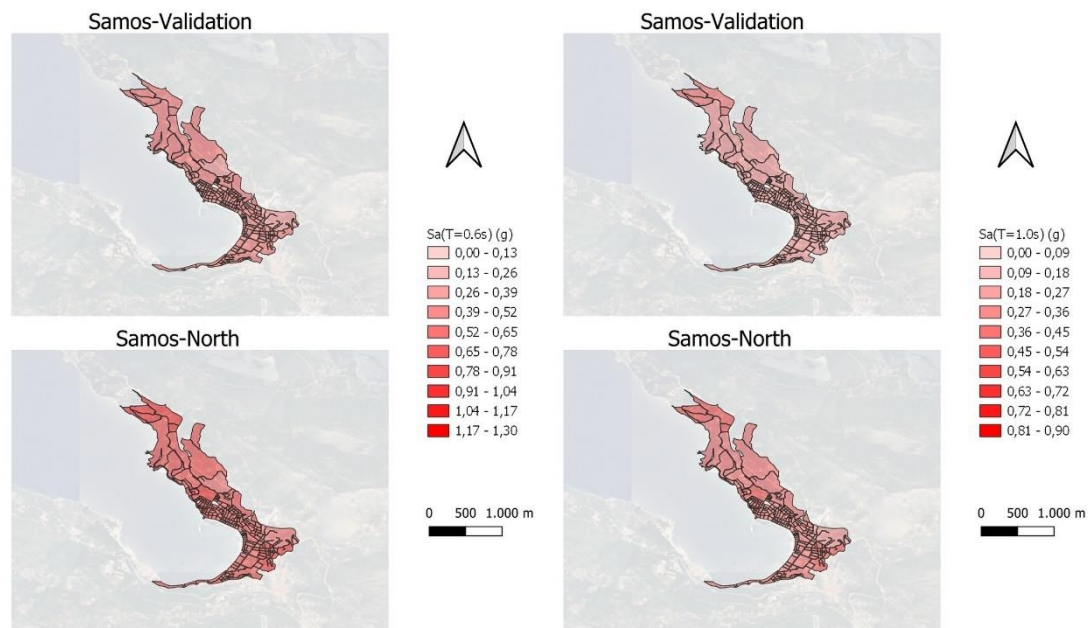


Figure 83. DSHA results for the Samos pilot site. $S_{a,T=0.6}$ and $S_{a,T=1.0}$ for the Samos-Validation and the Samos-North cases.

3.2.3 Damage estimation

For the damage estimation of the school buildings in Samos, the fragility curves proposed by Martins & Silva (2021) were used for the main series of analyses with some extra ones were carried out where the ESRM2020 (2019) set was tested, as described in detail in section 2. In the methodology used, four distinct damage states are defined for the buildings (slight, moderate, extensive and complete damage). In the following, the corresponding results for the five different seismic hazard scenarios taken into account (see §3.1.2) are presented, as evaluated through the use of the REDAS software.

In Figures 84-86, the number of school buildings per GEM typology (see Figure 73 and related text in §3.1.1) and damage state in the city of Samos for the three probabilistic seismic hazard (PSHA) scenarios (mean return periods of $T_m=100$, 475 and 950 years) are presented.

The corresponding figures for the two deterministic seismic hazard (DSHA) scenarios, namely Samos-North and Samos-Validation, are presented in Figure 87 and Figure 88, respectively.



Figure 84. Number of school buildings per GEM typology and damage state in the city of Samos for PSHA scenario with Tm=100 yrs.



Figure 85. Number of school buildings per GEM typology and damage state in the city of Samos for PSHA scenario with $T_m=475$ yrs.



Figure 86. Number of school buildings per GEM typology and damage state in the city of Samos for PSHA scenario with $T_m=950$ yrs.



Figure 87. Number of school buildings per GEM typology and damage state in the city of Samos for the DSHA scenario of the Samos-North fault.



Figure 88. Number of school buildings per GEM typology and damage state in the city of Samos for the Samos-Validation DSHA scenario.

The spatial damage state distribution for school buildings in Samos for the three PSHA scenarios (mean return periods of $T_m=100$, 475 and 950 years) are presented in Figures 89-91.

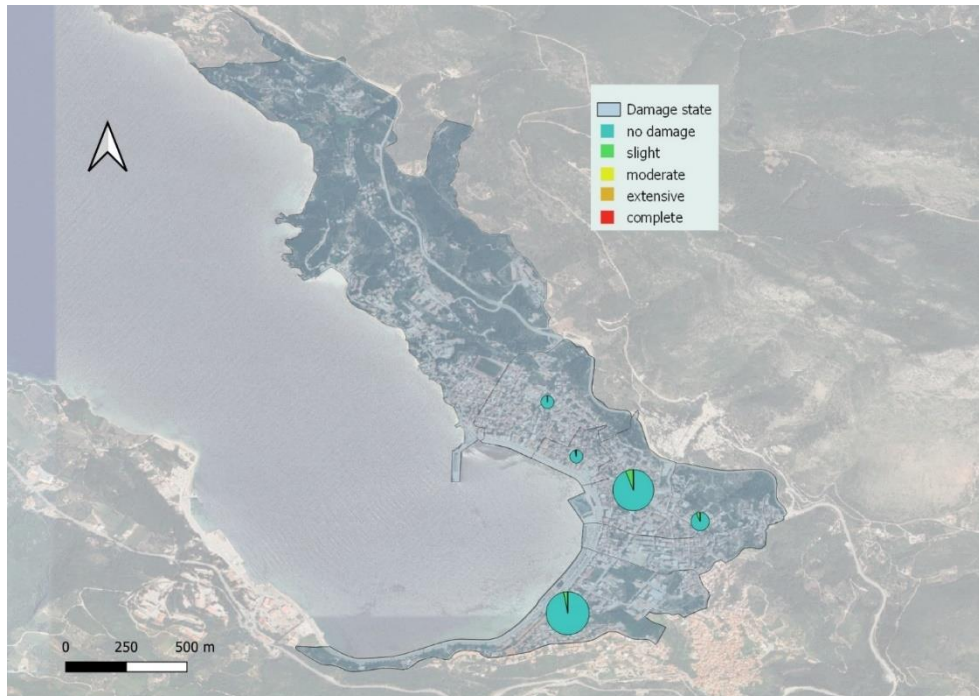


Figure 89. Spatial damage state distribution for school buildings in Samos for PSHA scenario with $T_m=100$ yrs.

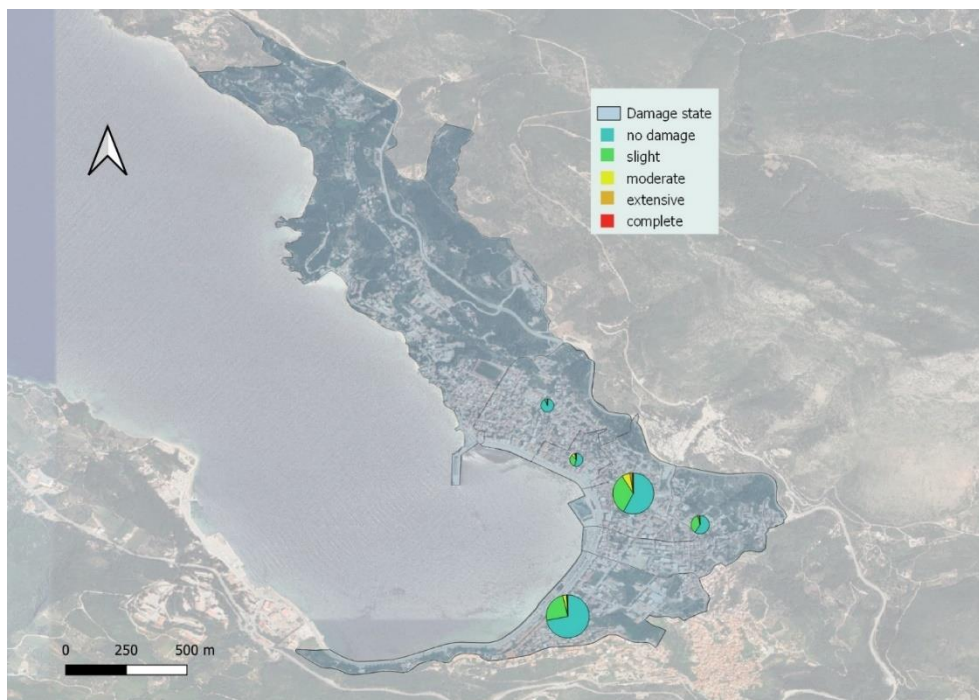


Figure 90. Spatial damage state distribution for school buildings in Samos for PSHA scenario with $T_m=475$ yrs.

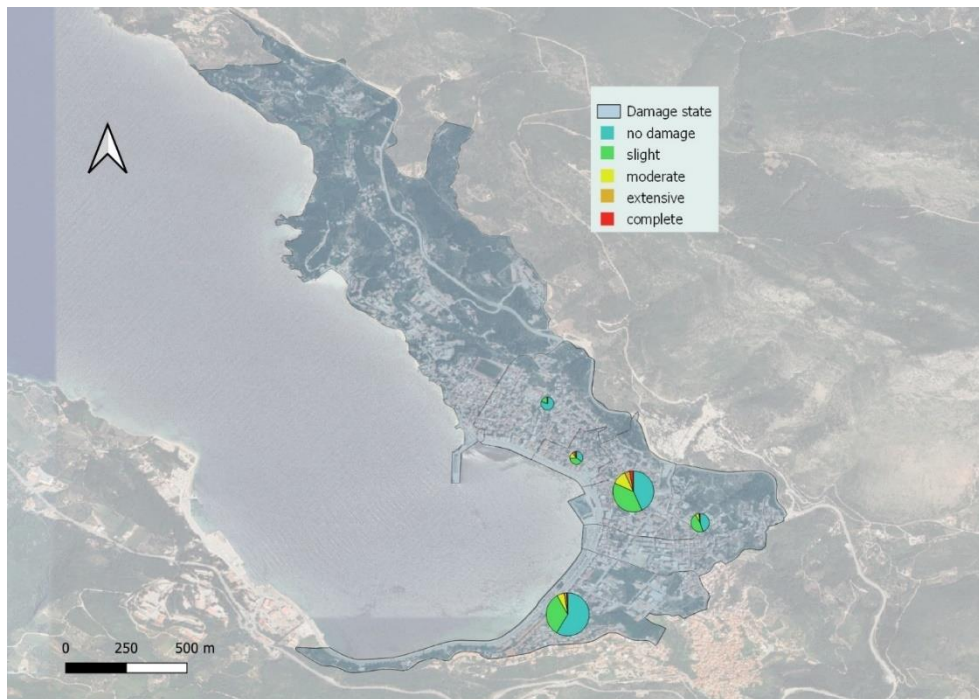


Figure 91. Spatial damage state distribution for school buildings in Samos for PSHA scenario with $T_m=950$ yrs.

The corresponding figures for the two deterministic seismic hazard (DSHA) scenarios, namely Samos-North and Samos-Validation, are presented in Figure 92 and Figure 93, respectively.

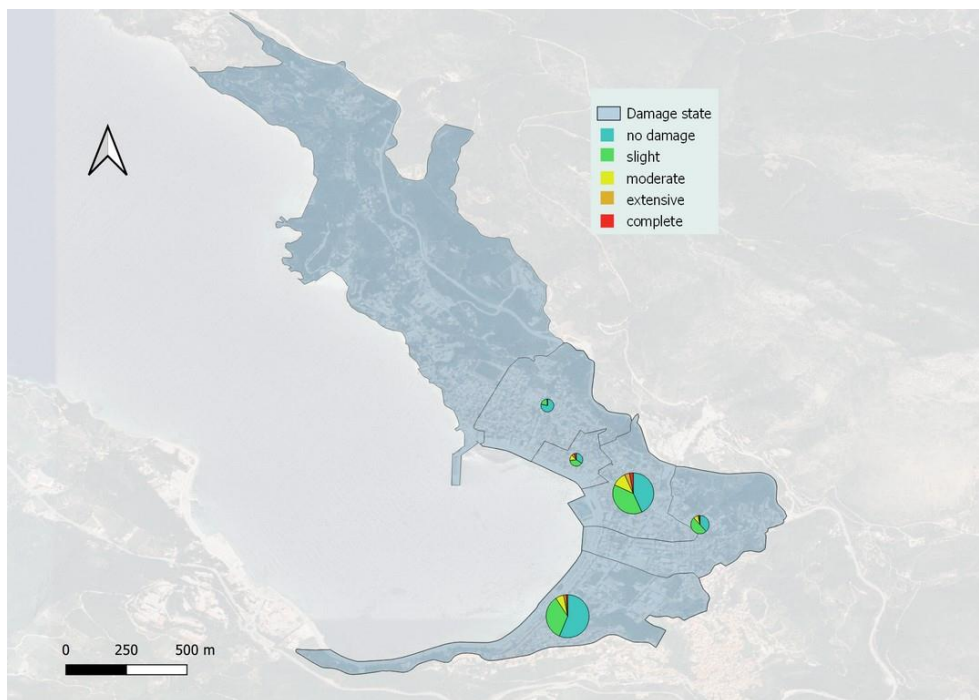


Figure 92. Spatial damage state distribution for school buildings in Samos for the DSHA scenario of the Samos-North fault.

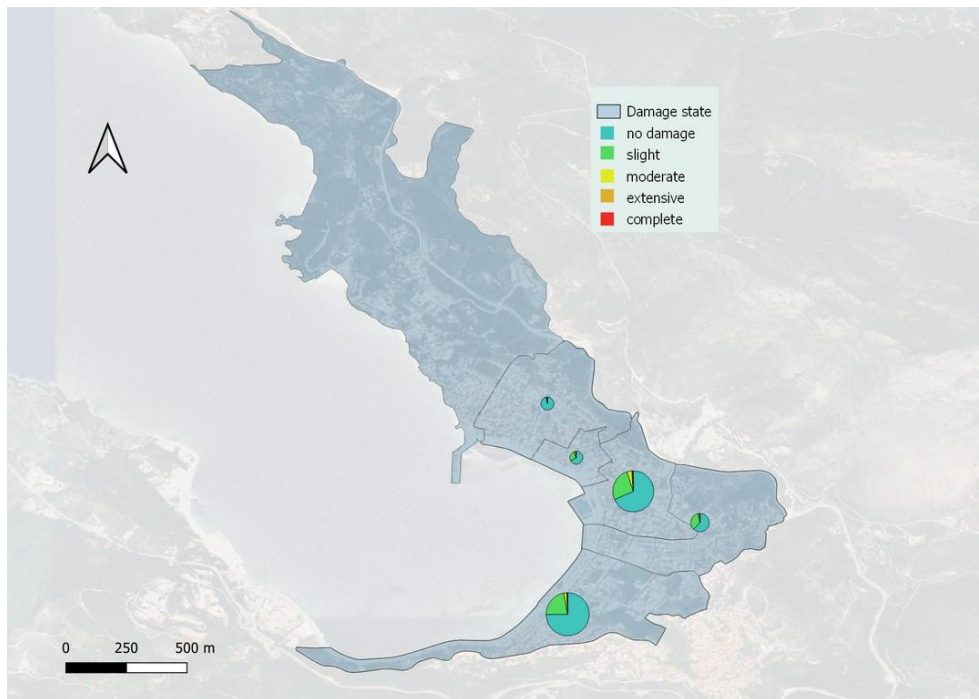


Figure 93. Spatial damage state distribution for school buildings in Samos for the Samos-Validation DSHA scenario.

Finally, the spatial mean damage factor distribution for school buildings in Samos for the three PSHA scenarios (mean return periods of $T_m=100$, 475 and 950 years) are presented in Figures 94-96.



Figure 94. Spatial mean damage factor distribution for school buildings in Samos for PSHA scenario with $T_m=100$ yrs

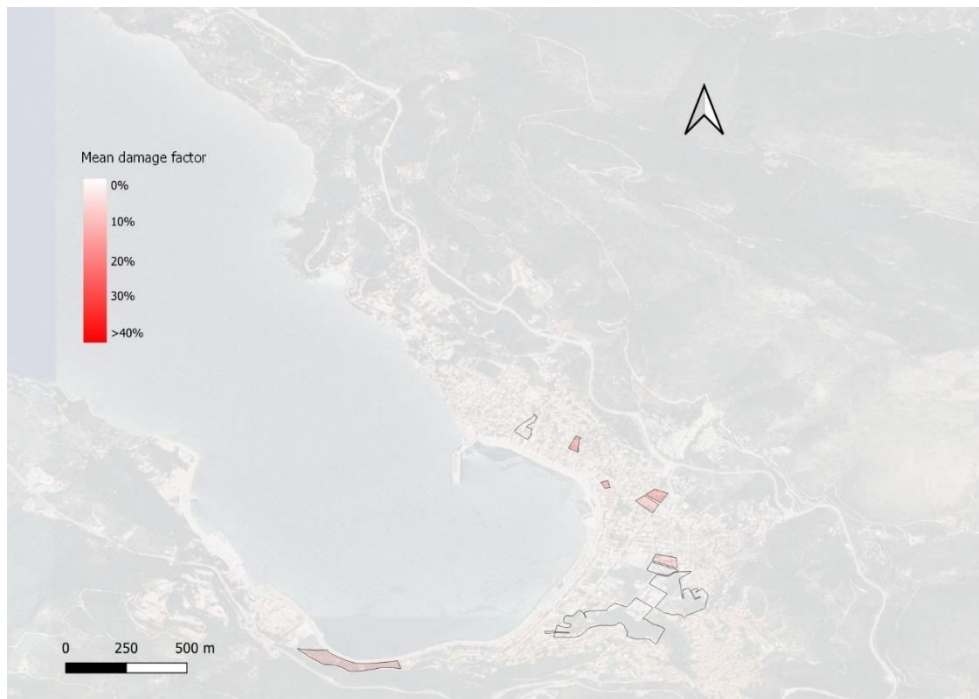


Figure 95. Spatial mean damage factor distribution for school buildings in Samos for PSHA scenario with $T_m=475$ yrs



Figure 96. Spatial mean damage factor distribution for school buildings in Samos for PSHA scenario with $T_m=950$ yrs

The corresponding figures for the two deterministic seismic hazard (DSHA) scenarios, namely Samos-North and Samos-Validation, are presented in Figure 97 and Figure 98, respectively.



Figure 97. Spatial mean damage factor distribution for school buildings in Samos for the DSHA scenario of the Samos-North fault.



Figure 98. Spatial mean damage factor distribution for school buildings in Samos for the Samos-Validation DSHA scenario.

To obtain a more comprehensive understanding of the damage estimates in the pilot site of Vathy in Samos and to facilitate comparisons with the M7.0 Samos Earthquake of October 30, 2020, additional risk analyses were conducted, this time using the indicative preliminary synthesis of the entire building stock of the city, presented in section 3.2.1. The risk results of the entire building stock for the DSHA scenario of the Samos-North fault are presented in Figure 99.

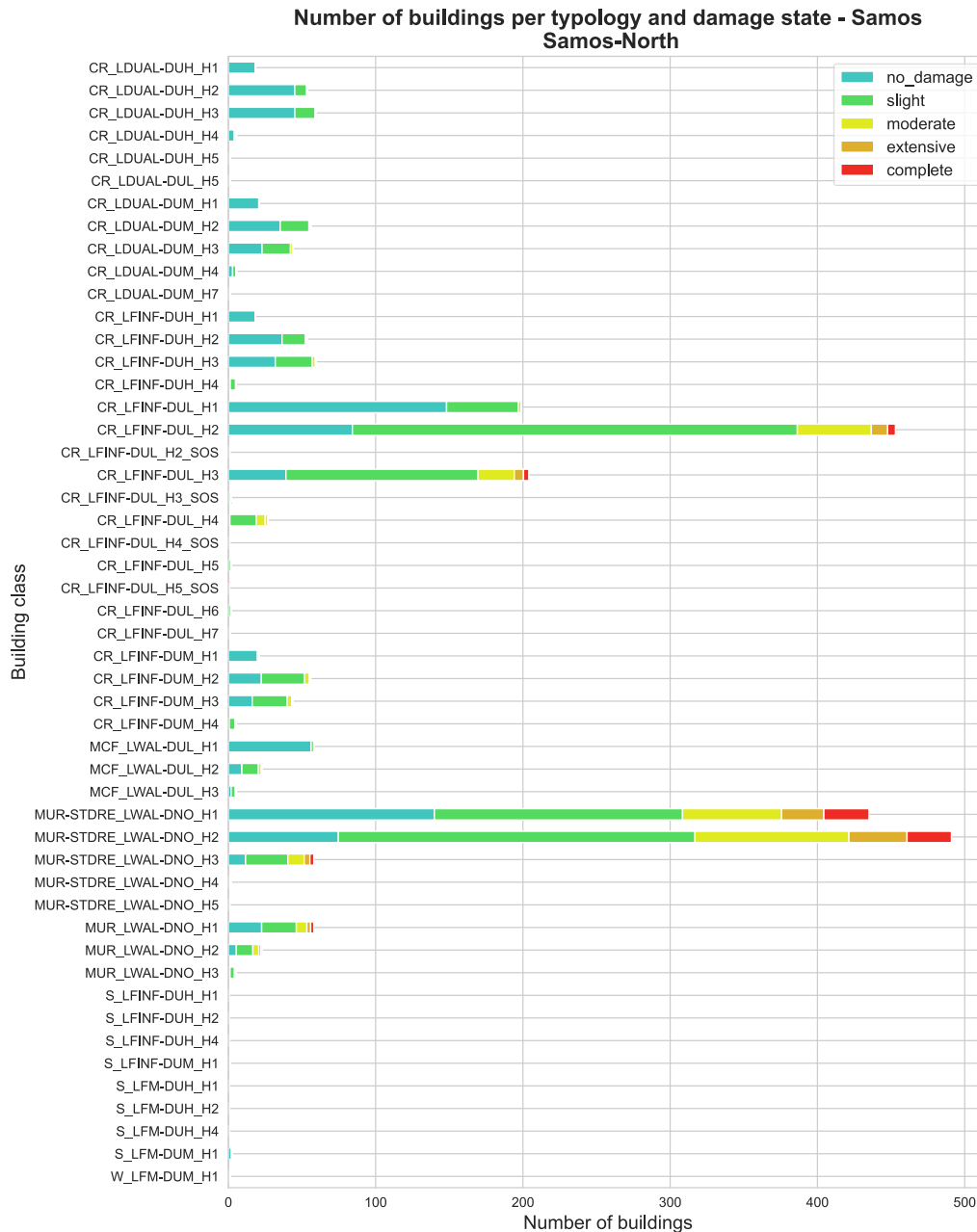


Figure 99. Number of buildings per GEM typology and damage state for the entire building stock in the city of Samos for the DSHA scenario of the Samos-North fault.

The risk results of the entire building stock for for the Samos-Validation DSHA scenario are presented in Figure 100.

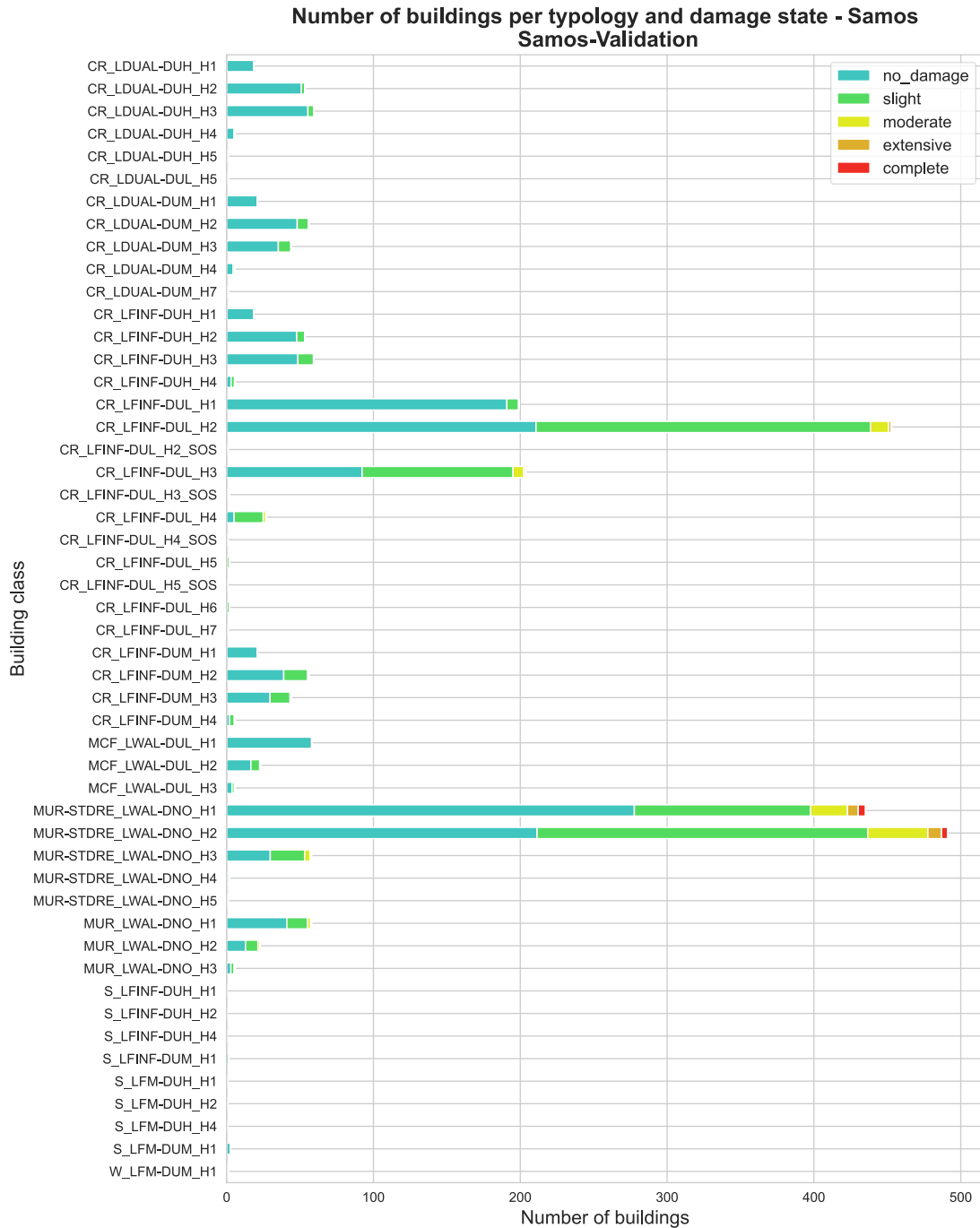


Figure 100. Number of buildings per GEM typology and damage state for the entire building stock in the city of Samos for the Samos-Validation DSHA scenario.

Table 7. Mean and maximum values of the mean damage factor (MDF) for school buildings in the building blocks in the Samos pilot site.

	Scenario	Mean MDF	max MDF
PHSA	Tm=100yrs	0.3%	0.7%
	Tm=475	3.6%	8.7%
	Tm=950yrs	7.0%	16.4%
DHSA	Samos-North	7.5%	16.4%
	Samos-Validation	2.4%	5.3%

3.2.4 Discussion - Comparisons with observed data

The risk assessment of the school building stock in the Samos pilot site for the probabilistic scenarios indicated higher levels of damage compared to Alexandroupolis, due to the increased acceleration values presented in Section 3.2.2.1 and deliverable D2.2. This finding aligns with the higher seismicity of the area, which is classified as Zone II according to the seismic hazard map in the current Greek codes (Eurocode 8 and EAK2000). The DHSA scenario for the Samos-North fault resulted in damage to the school buildings that closely resembles the damage predicted in the PHSA scenario for a 950-year return period.

The overall performance of the school building stock generally met expectations. For earthquakes with lower return periods, the buildings performed well, with no or only slight damage, particularly those designed according to modern seismic codes. However, as the return period increases and the seismic events become more severe (i.e. higher acceleration values), the extent of damage escalates, with more buildings expected to enter damage states corresponding to moderate, extensive, or even collapse. Older buildings, particularly the stone masonry structures that are common in the school building stock in Samos, appear to be more vulnerable.

The Samos-Validation DHSA scenario developed in D2.2 of this project aims to estimate the seismic acceleration values experienced during the M7.0 Samos Earthquake of October 30, 2020, which struck the northern coast of Samos Island in the western Aegean Sea, near the border area between Greece and Türkiye. The epicenter of this earthquake was approximately 14 km from Samos Island and resulted in 2 fatalities and 19 injuries on the Greek side (ITSAK, 2020), along with significant damage to the building stock, including

school buildings. The impact of this seismic event was even more severe on the Türkiye side, as it will be presented in the next section for the Izmir pilot site.

Unfortunately, to our knowledge, no comprehensive dataset of the damaged buildings has been compiled, making direct comparison with the damage estimates presented in this study challenging. However, several reports and papers have been published that offer descriptive approaches of the observed damage on Samos Island. The Hellenic Association of Earthquake Engineering published a preliminary report in Greek (Vadaloukas et al., 2020), followed by a final report (Cetin et al., 2020), which appear to contain the most detailed information available.

Regarding the school building stock in the pilot site area (Municipality of Eastern Samos, Vathy), a post-earthquake rapid visual inspection was conducted for 36 school buildings, categorizing them on a scale from A to E, where (A) indicates 'Safe to use' and (E) indicates 'Unsafe to use' (Vadaloukas et al., 2020). The inspection results showed that 12 school buildings were classified as (A), 7 as (B), 4 as (C), 4 as (D), 1 as (E), and 7 were placed in mixed categories between (A) and (D). These findings align well with the results of our analysis, likely falling between the Samos-Validation DHSA and the Samos-North DHSA scenarios (which produce results similar to the $T_m=950$ years PHSA scenario).

Similar observations are evident when comparing the results for the entire building stock in the pilot site area with the data provided in the final report by Cetin et al. (2020). Older brick and stone unreinforced masonry buildings, along with reinforced concrete structures designed to outdated seismic codes (1959-1984) or even without any seismic provisions (<1959), appear to be the most vulnerable, as expected.

Considering the inherent uncertainties associated with seismic risk assessment—such as hazard estimation, accurate representation of the building stock, and the selection of appropriate fragility curves—our methodology appears to provide seismic damage results which compare well with the recorded damage, both for school buildings and the entire building stock. It should be noted here that, since a detailed and reliable record of the damages after the Samos-Izmir earthquake is not available, the existing damage data reported in the initial on-site inspections after the earthquake tend to present a situation that is more adverse than the reality, both to be on the safety side and under the weight of the assumed responsibility during the post-earthquake crisis management period. The ESRM20 fragility curves

tend to yield more significant damage results in specific structural typologies (see Section 2.2), yet, since they are only recently introduced, they lack extended validation and confirmation of their applicability extent from the scientific community. Considering the above, the Martins and Silva (2021) fragility curves will be primarily used for seismic risk assessment purposes in the area using the REDA platform. However, simultaneous testing of the ESRM20 curves will continue to determine over time whether they constitute a reliable alternative that improves estimates.

3.3 IZMIR

3.3.1 School building stock

The list of the school buildings located in Izmir province were given in the D3.1 deliverable. The updated list and statistical distribution of the school buildings are given in this report in the Annex-A and in the Section 4, respectively. Six of the school buildings have been selected as the pilot schools to be instrumented with the NGA devices. The distribution of the pilot schools is presented in Figure 101.

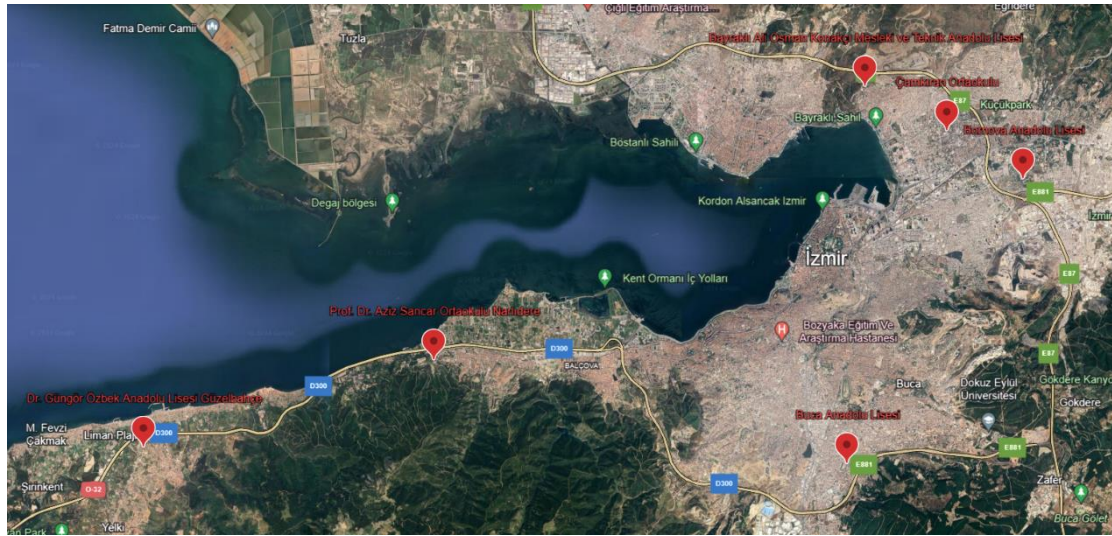


Figure 101. Geographical distribution of the pilot schools with different soil conditions in İzmir province.

The general characteristics of the pilot schools in İzmir are presented in tabulated form in Table 8. The google map view, geographical coordinates and photo of the building taken during the site investigation are also presented in the Figure 102 to Figure 107 separately.

Table 8. Characteristics of the Pilot Schools selected in the first stage in İzmir province.

School Name	District	Construction Year	Structural System	# of Stories	Geology
Ali Osman Konakçı Mesleki ve Teknik Anadolu Lisesi	Bayraklı	2011	RC-MF-w-SW	3 (B+Z+2N)	Aglomera
Çamkiran OrtaOkulu	Bayraklı	2023	RC-MF-w-SW	4 (B+Z+3N)	Alüvyon
Bornova Anadolu Lisesi - G-Blok	Bornova	2015	RC-MF-w-SW	3(B+Z+2N)	Alüvyon
Buca Anadolu Lisesi	Buca	2011	RC-MF-w-SW		Kireçtaşı
Prof. Dr. Aziz Sancar Ortaokulu	Narlıdere	2011	RC-MF-w-SW	3 (B+Z+2N)	Kumtaşı-Çamurtaşı-Kireçtaşı
Dr.Güngör Özbek Anadolu Lisesi	Güzelbahçe	2015	RC-MF-w-SW	3 (B+Z+2N)	Çakıltaşı

i. Ali Osman Konakçı Mesleki ve Teknik Anadolu Lisesi



Figure 102. Google map view, geographical coordinates and a general photo of Ali Osman Konakçı Mesleki ve Teknik Anadolu Lisesi.

ii. Çamkiran Ortaokulu Bayraklı



Figure 103. Google map view, geographical coordinates and a general photo of Çamkiran Ortaokulu.

iii. Bornova Anadolu Lisesi- G Blok



Figure 104. Google map view, geographical coordinates and a general photo of Bornova Anadolu Lisesi-G Blok.

iv. Buca Anadolu Lisesi



Figure 105. Google map view, geographical coordinates and a general photo of Buca Anadolu Lisesi.

v. Prof. Dr. Aziz Sancar Ortaokulu



Figure 106. Google map view, geographical coordinates and a general photo of Prof. Dr. Aziz Sancar Ortaokulu.

vi. **Dr. GÜNGÖR ÖZBEK Anadolu Lisesi**



Figure 107. Google map view, geographical coordinates and a general photo of Dr. Güngör Özbek Anadolu Lisesi.

3.3.2 Hazard scenarios

The PSHA and DSHA have been studied and presented for the CBA including İzmir and Çanakkale provinces in the Deliverable 2.2. In this deliverable, the ground motion distributions with 100 years of return period for PSHA analysis and for DSHA are presented for İzmir province.

In Figures 108-112 the PSHA ground motion distributions for PGA, PGV, Sa0.3s, Sa0.6s and Sa1.0s are given.

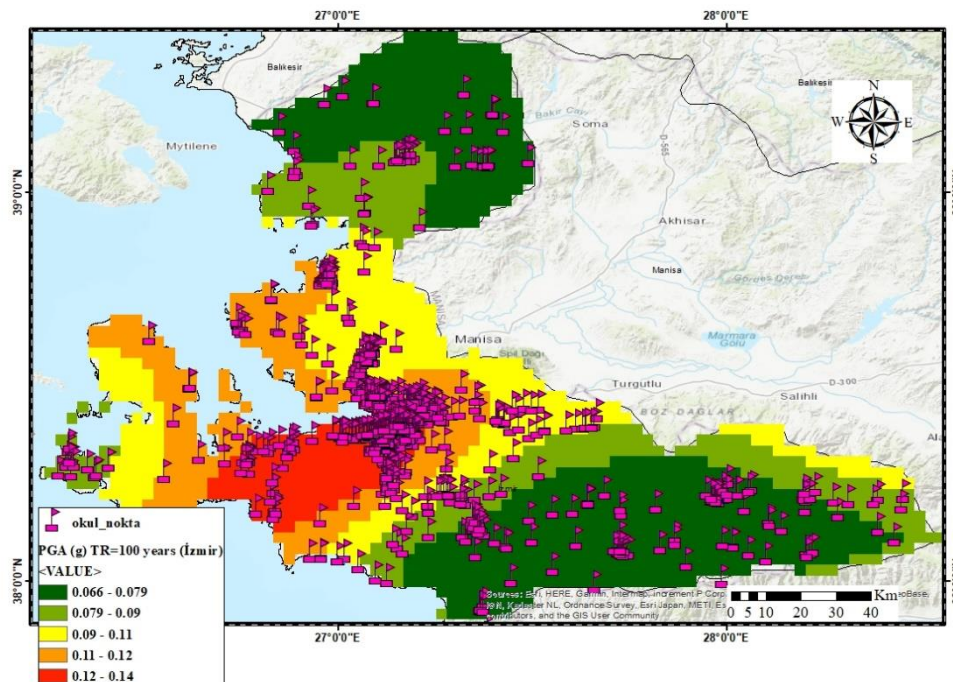


Figure 108. İzmir province PSHA with 100 years return period PGA distribution with School Buildings locations

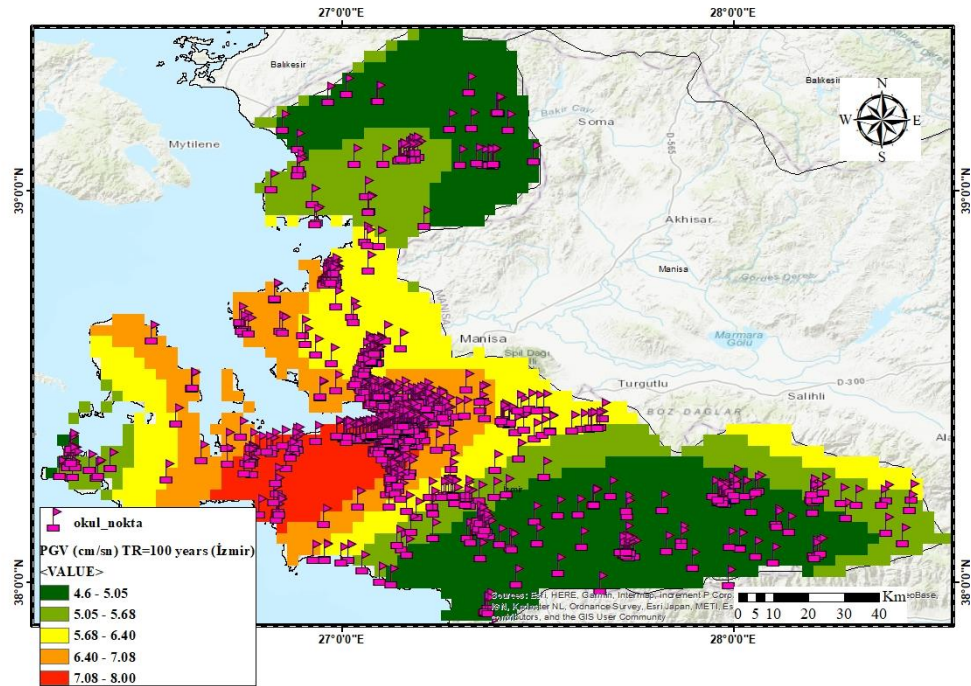


Figure 109. İzmir province PSHA with 100 years return period PGV distribution with School Buildings locations

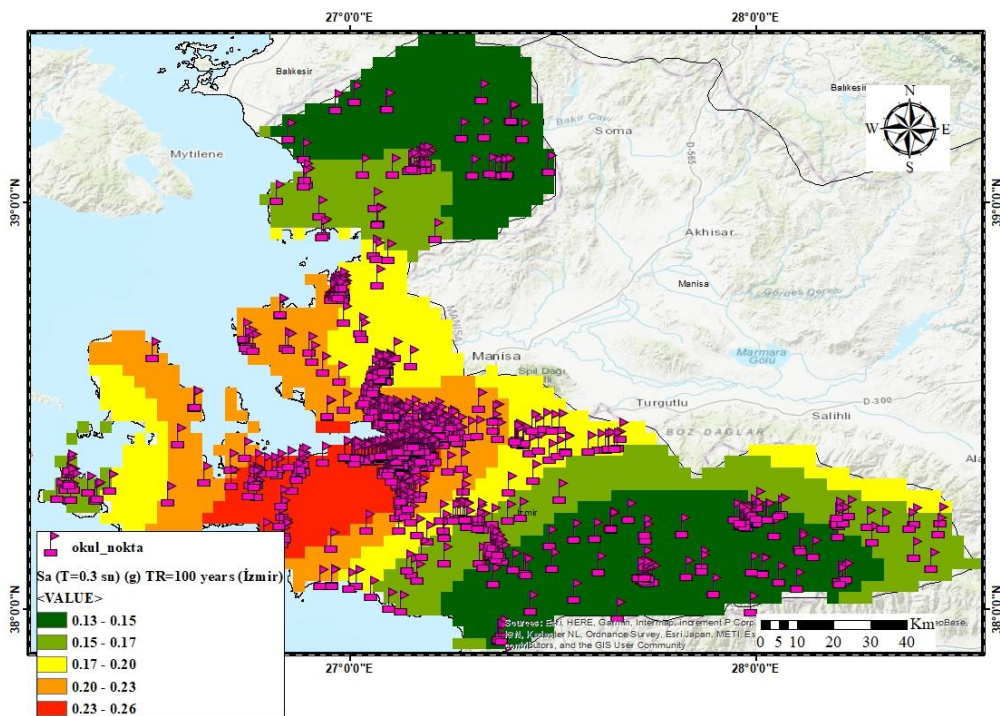


Figure 110. İzmir province PSHA with 100 years return period Sa(T=0.3s) distribution with School Buildings locations

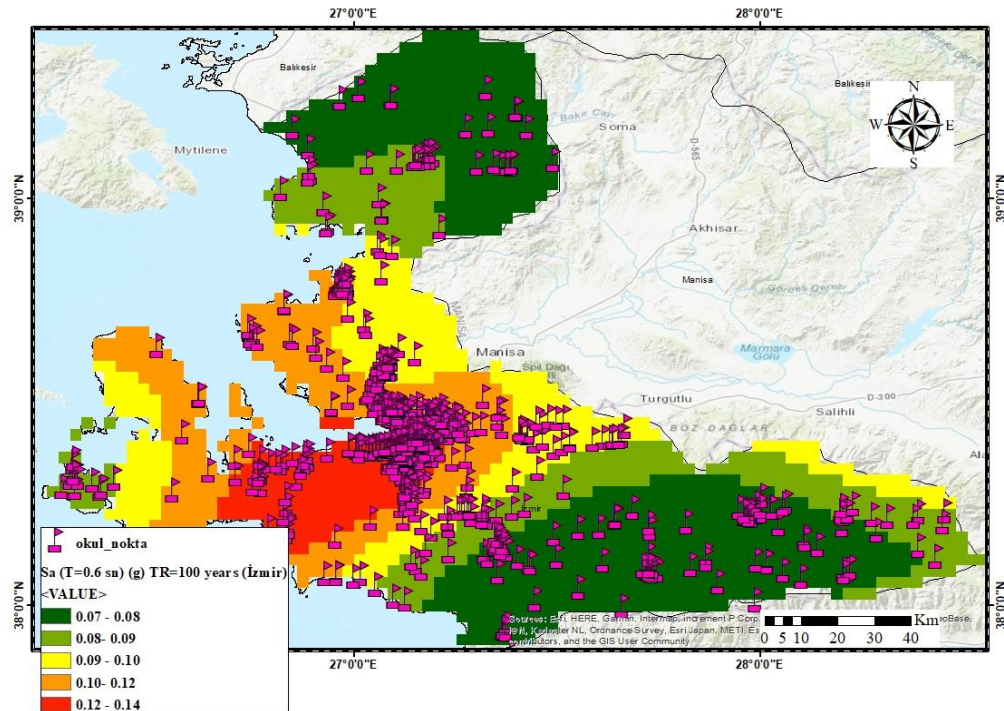


Figure 111. İzmir province PSHA with 100 years return period Sa(T=0.6s) distribution with School Buildings locations

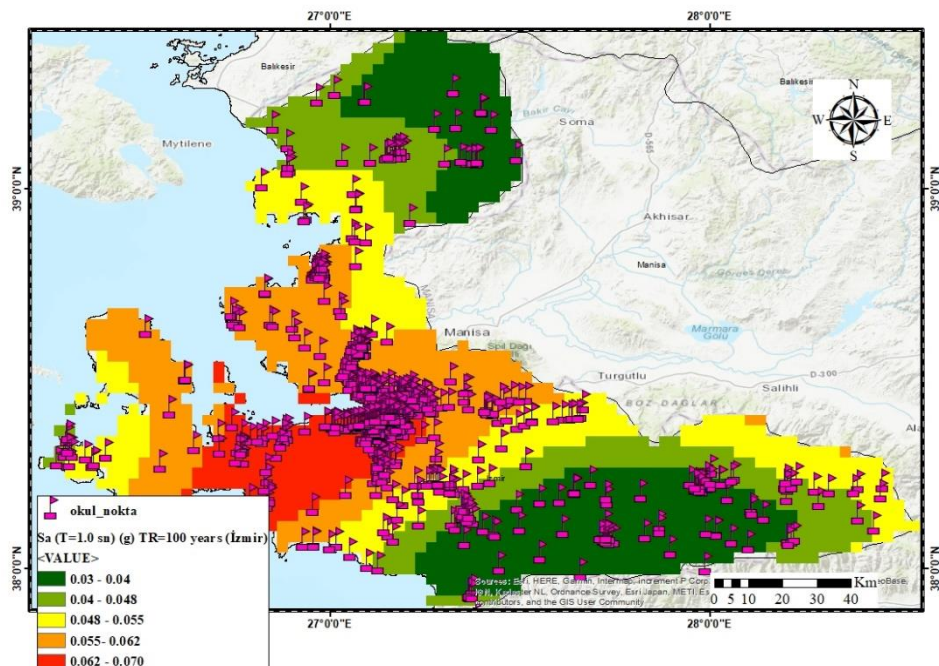


Figure 112. İzmir province PSHA with 100 years return period Sa(T=1.0s) distribution with School Buildings locations

The Deterministic Seismic Hazard Assessment (DSHA) maps for İzmir site, have been generated for the so-called near-field (< 50 km) seismic fault-sources

per site, with a potential of generating high magnitude earthquakes ($M > 6.5$) and causing high Peak Ground Acceleration (PGA) values (e.g. > 0.1 g). İzmir scenario earthquake and the location of the schools is presented in Figure 113.

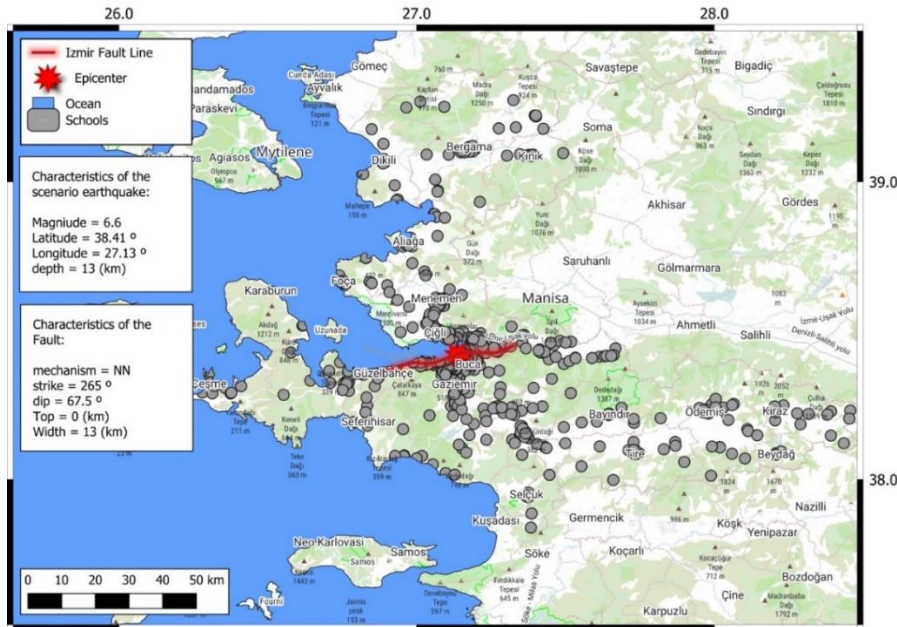


Figure 113. İzmir Scenario Earthquake

Moreover, the DSHA maps have been produced for “cell” specific (0.005 x 0.005 degrees) Vs30 values, estimated by Stewart et al. 2014, based on the geology and slope gradient for five soil categories based on geologic age. In Figure 114 and Figure 115, the İzmir Scenario Earthquake PGA and PGV distribution is given respectively including the cell-specific Vs,30 information.

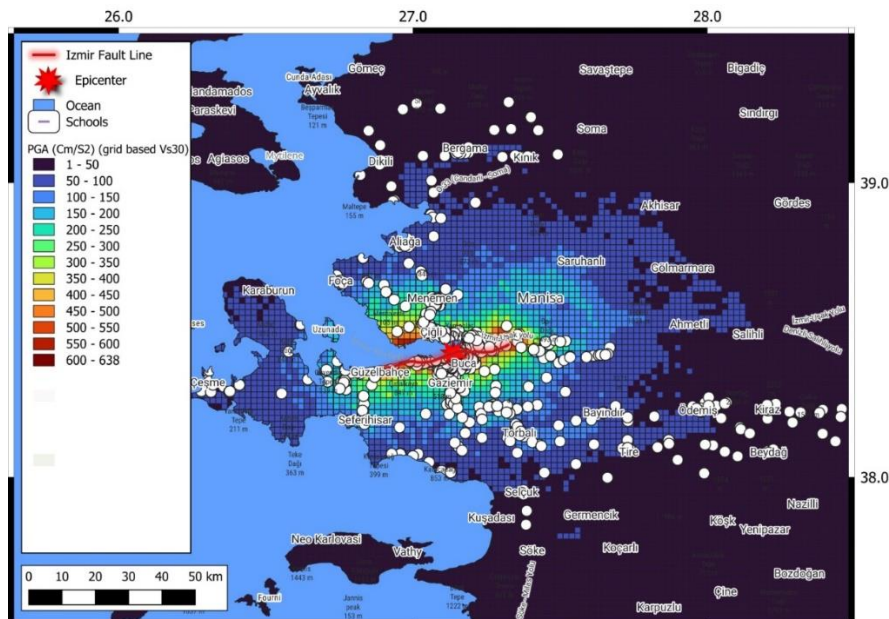


Figure 114. İzmir Scenario Earthquake PGA distribution with School Buildings locations

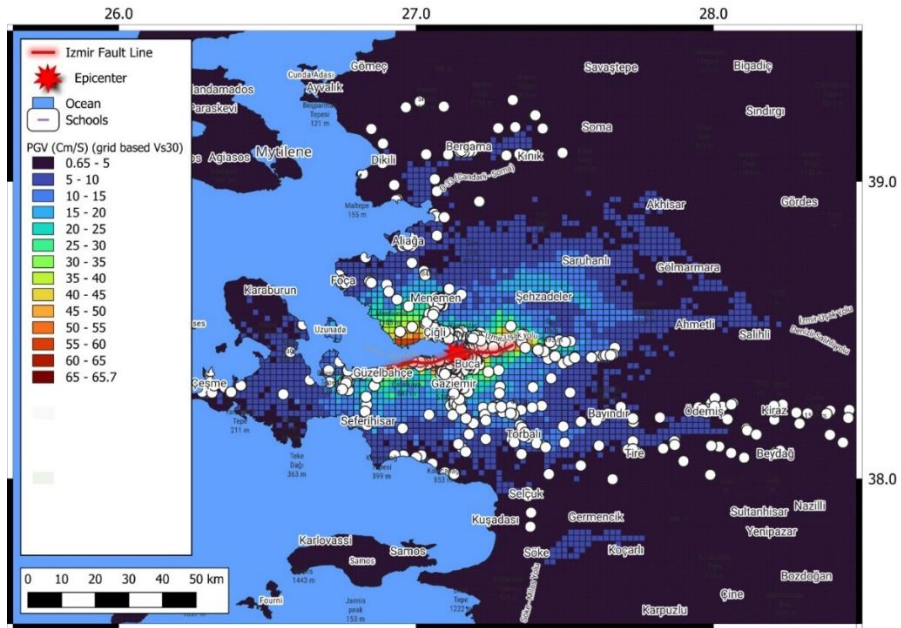


Figure 115. İzmir Scenario Earthquake PGV distribution with School Buildings locations
 Figure 116, Figure 117 and Figure 118 illustrates the results of the DSHA regarding İzmir Scenario Earthquake with the distributions of Sa 0.3s, 0.6s and 1.0s respectively.

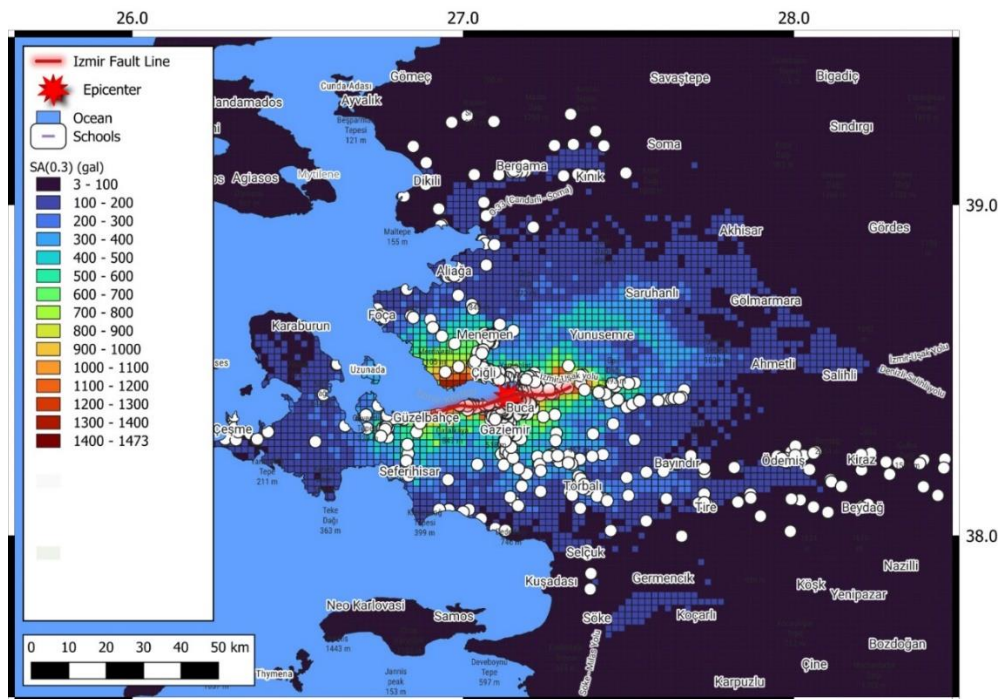


Figure 116. İzmir Scenario Earthquake Sa(0.3s) distribution with School Buildings locations

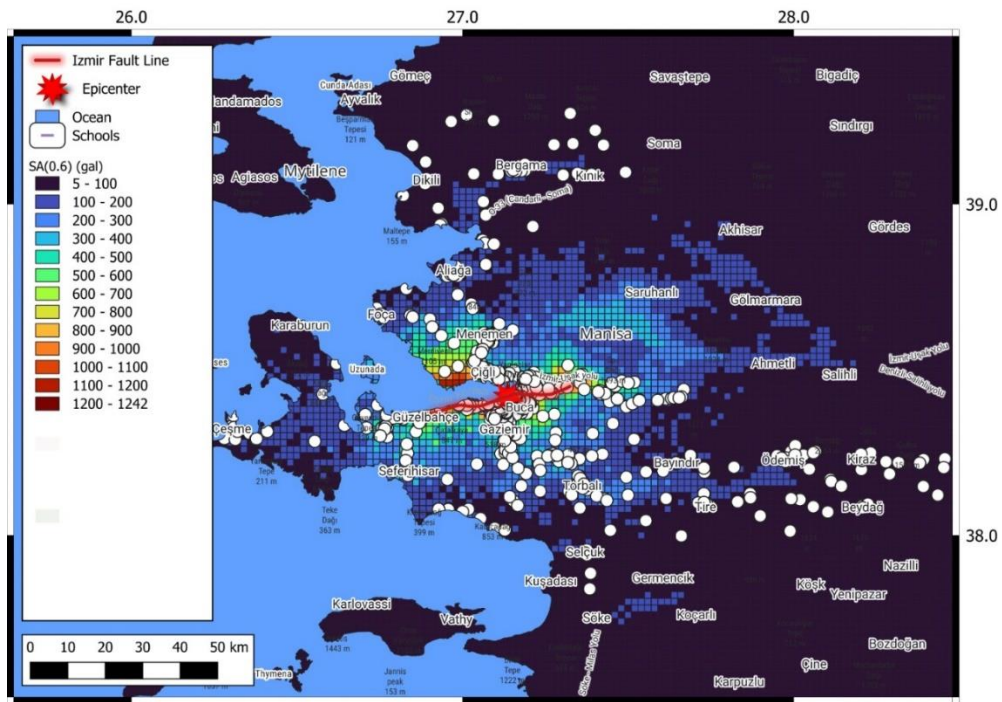


Figure 117. İzmir Scenario Earthquake Sa(0.6s) distribution with School Buildings locations

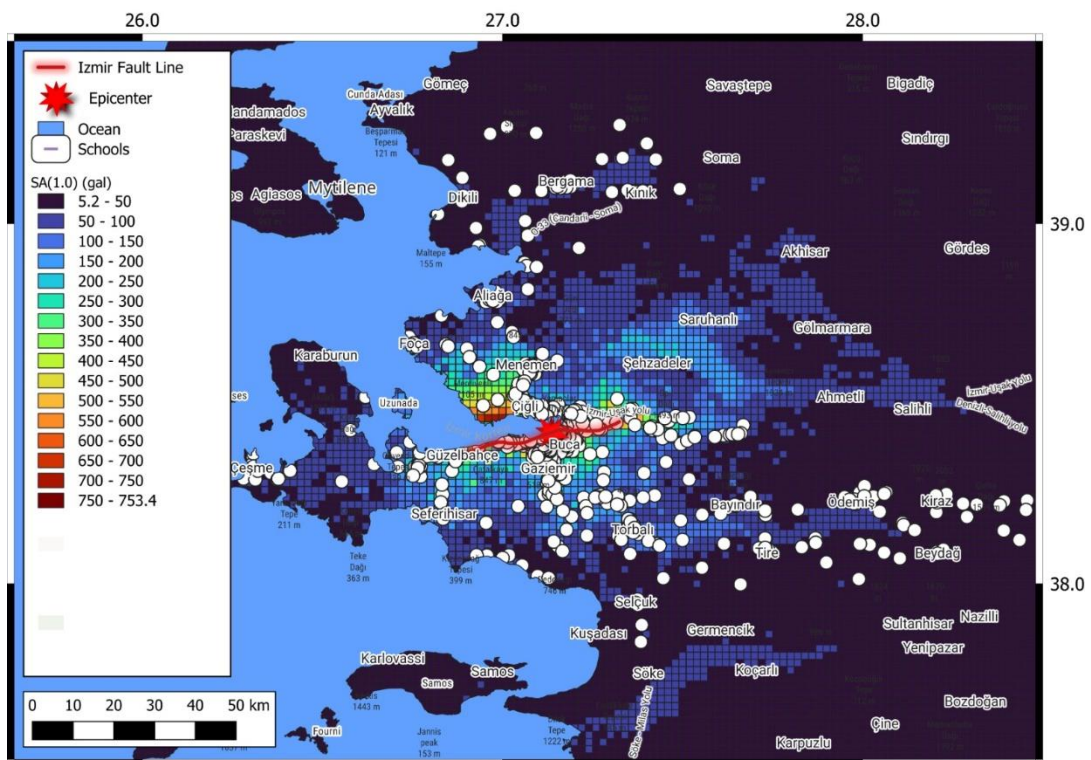


Figure 118. İzmir Scenario Earthquake Sa(1.0s) distribution with School Buildings locations

3.3.3 Damage estimation

The damage evaluation has been done based on both the Probabilistic Seismic Hazard Assessment (PSHA) and Deterministic Seismic Hazard Assessment (DSHA) for İzmir site. In the probabilistic approach a recurrence period of 100, 475 and 950 years has been used and related damage distribution is presented in the charts in Figures 119-130.

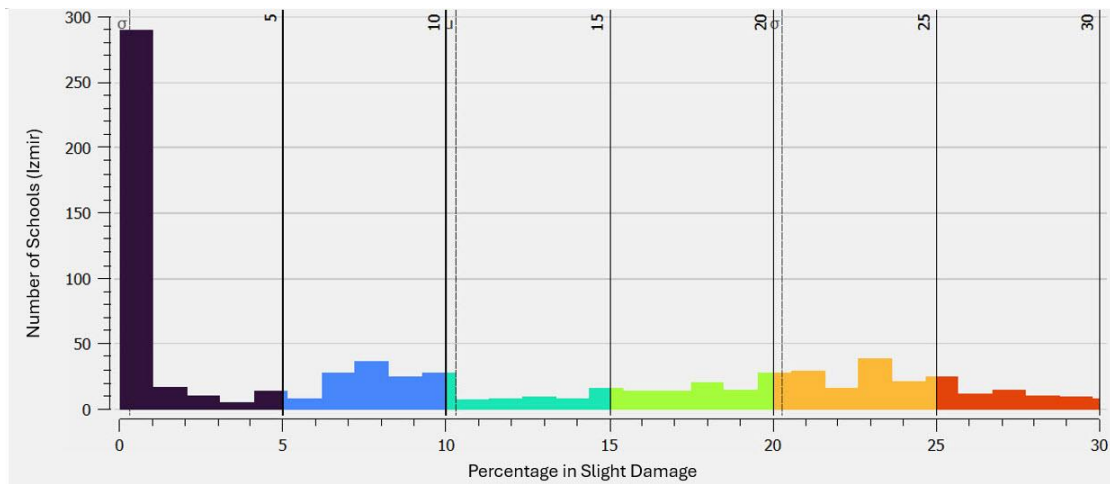


Figure 119. İzmir PSHA Results with 100 years return period _Slight Damage level distribution in School Buildings

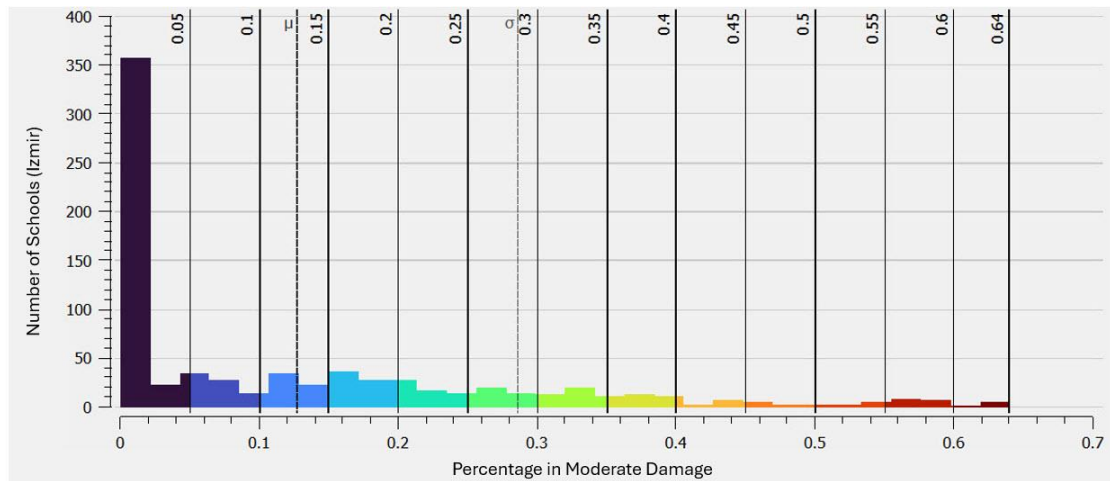


Figure 120. İzmir PSHA Results with 100 years return period _Moderate Damage level distribution in School Buildings

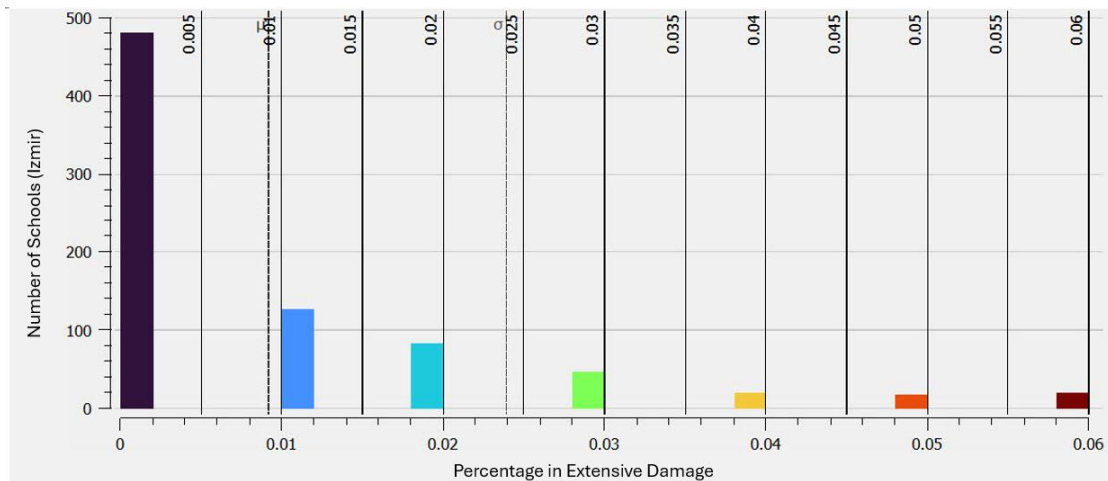


Figure 121. Izmir PSHA Results with 100 years return period _Extensive Damage level distribution in School Buildings

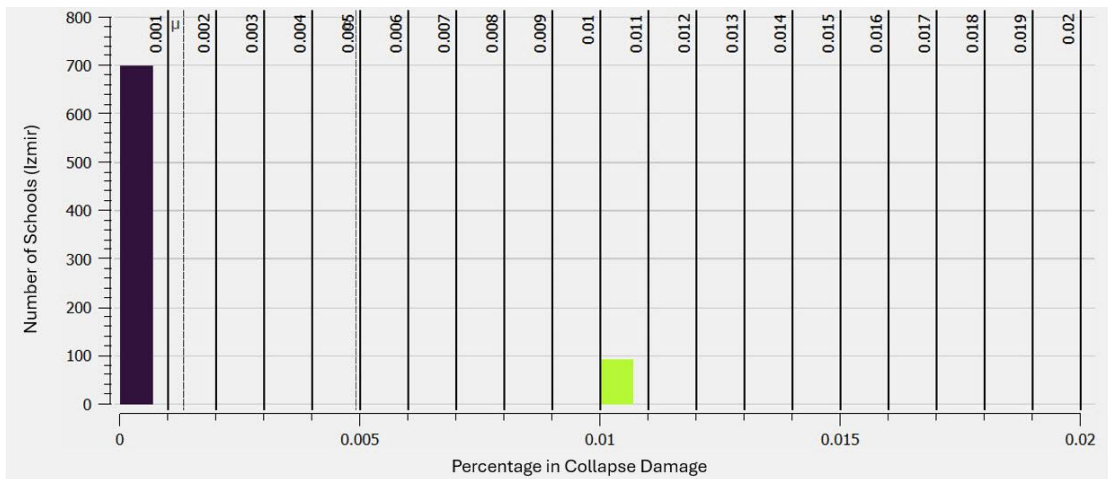


Figure 122. Izmir PSHA Results with 100 years return period _Collapse level distribution in School Buildings

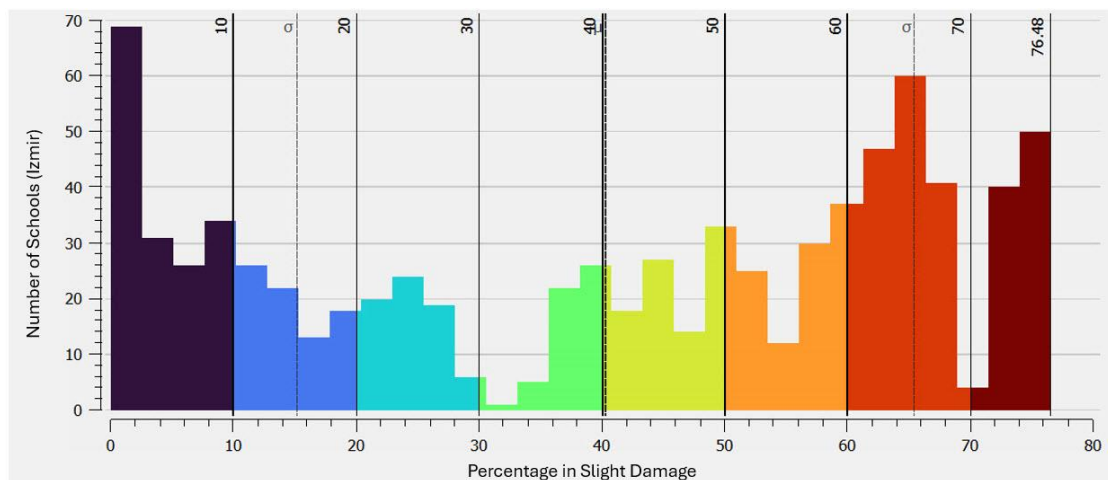


Figure 123. Izmir PSHA Results with 475 years return period _Slight Damage level distribution in School Buildings

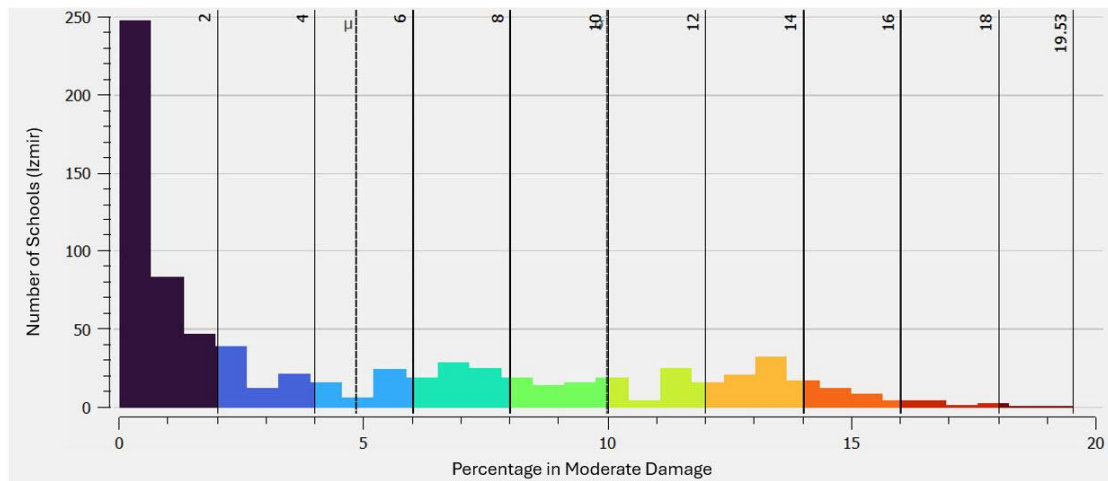


Figure 124. Izmir PSHA Results with 475 years return period _Moderate Damage level distribution in School Buildings

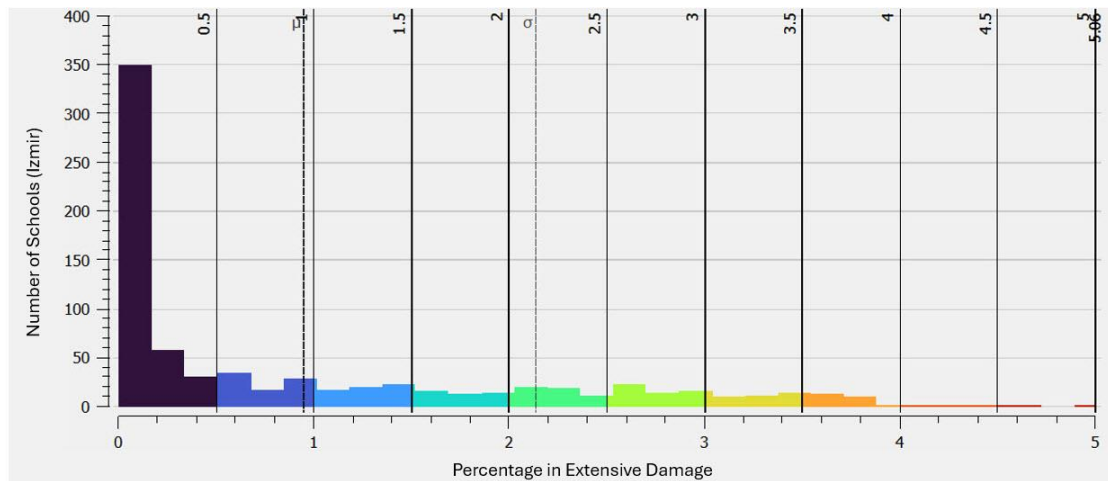


Figure 125. Izmir PSHA Results with 475 years return period _Extensive Damage level distribution in School Buildings

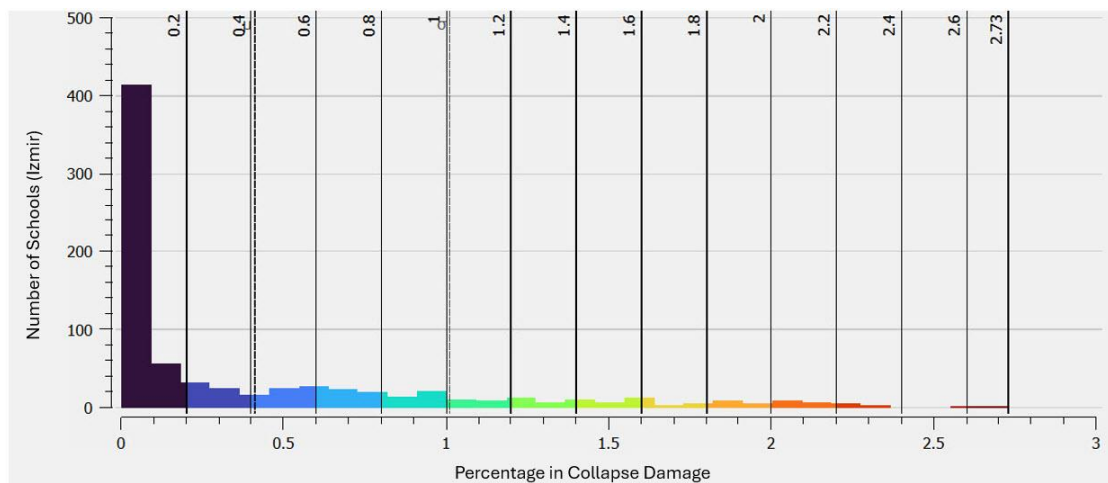


Figure 126. Izmir PSHA Results with 475 years return period _Collapse level distribution in School Buildings

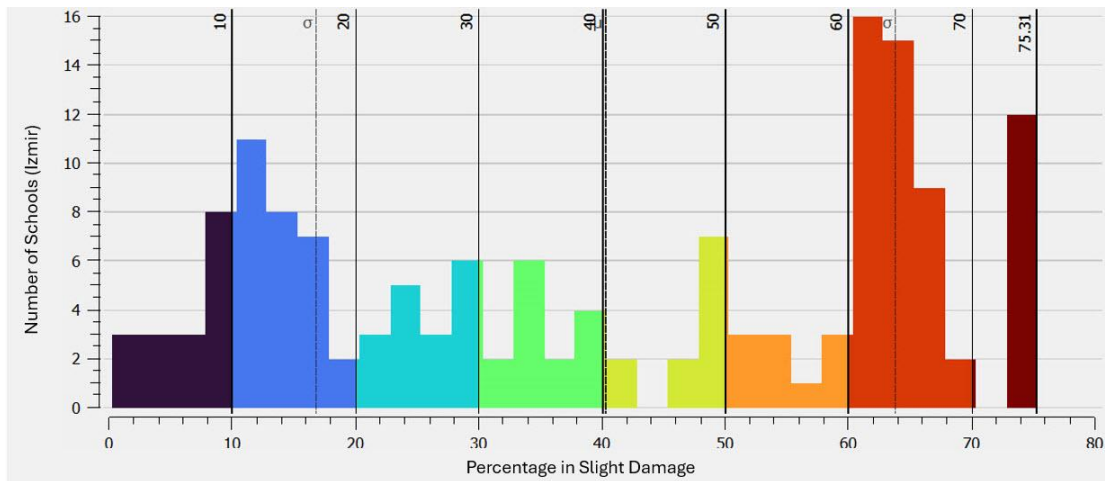


Figure 127. Izmir PSHA Results with 950 years return period _Slight Damage level distribution in School Buildings

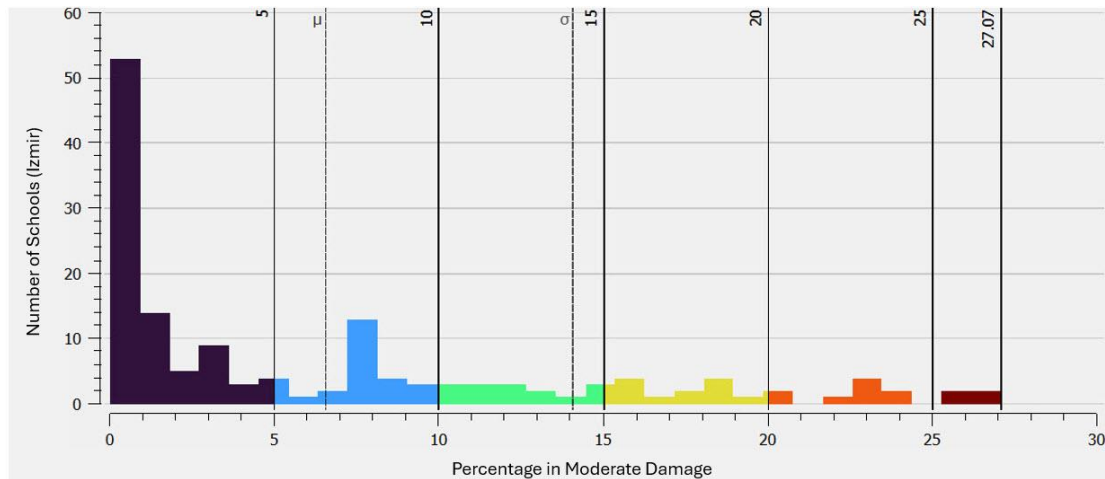


Figure 128. Izmir PSHA Results with 950 years return period _Moderate Damage level distribution in School Buildings

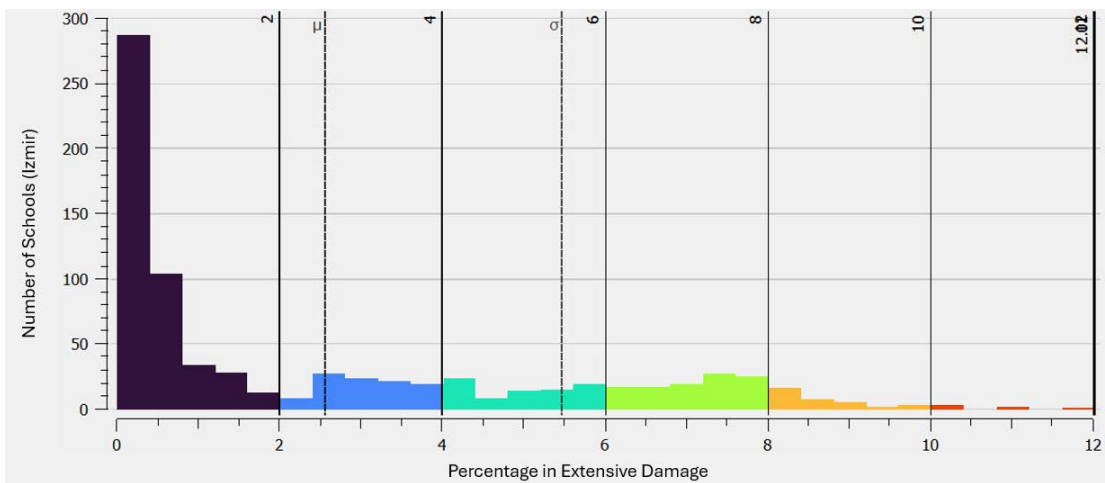


Figure 129. Izmir PSHA Results with 950 years return period _Extensive Damage level distribution in School Buildings

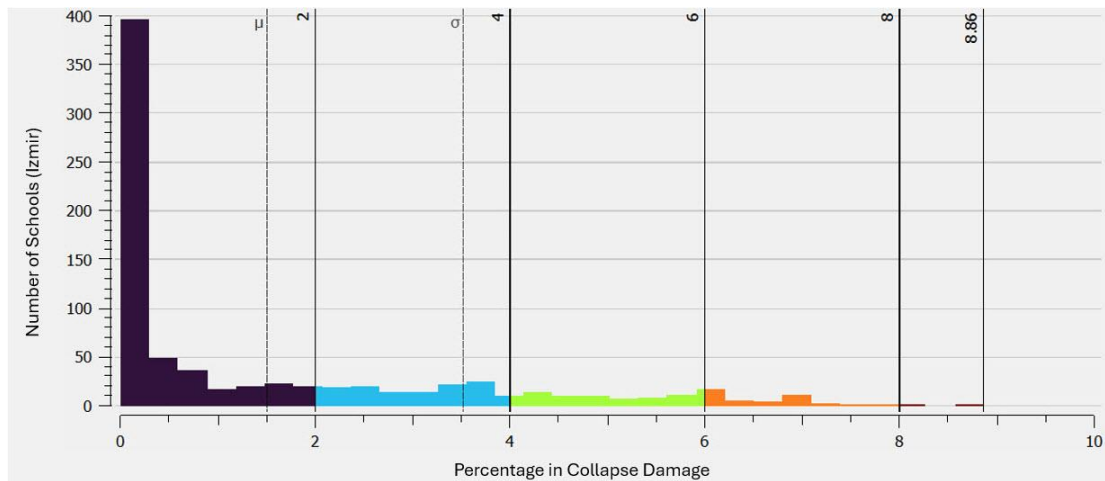


Figure 130. PSHA Results with 950 years return period _Collapse level distribution in School Buildings

In the deterministic approach, DSHA results have been used and the damage distribution has been analyzed in different damage levels throughout the province. The damage distribution in maps and charts are presented in Figures 131-134.

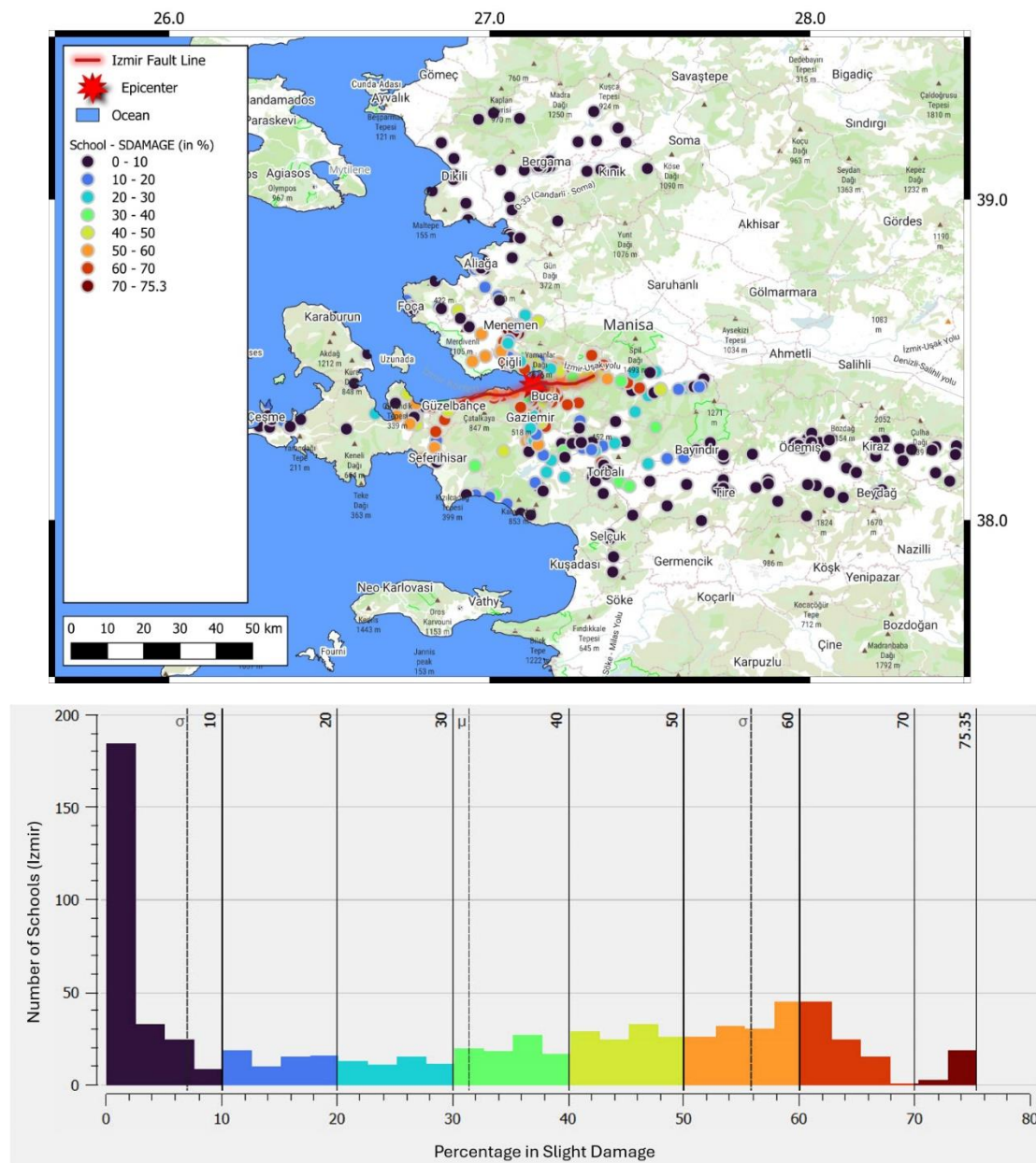


Figure 131. Izmir Scenario Earthquake Slight Damage level distribution in School Buildings

This histogram illustrates the percent of the distribution of schools that suffered slight damage in Izmir Province. X-axis represents the percentage of the schools that had slight damages, ranging from 0% to 75.35% while the Y-axis represents the total number of schools against each percentage category of damage.

Most schools are concentrated in minimal damage of between 0-10% as represented by the tall bar on the far left. Moving right, with increasing percentages of damage, the number of schools drops, but with a noticeable uptick in schools with damage percentages between 50-70%, showing

significant damage in some. The vertical dashed lines indicate Standard deviation and mean value.

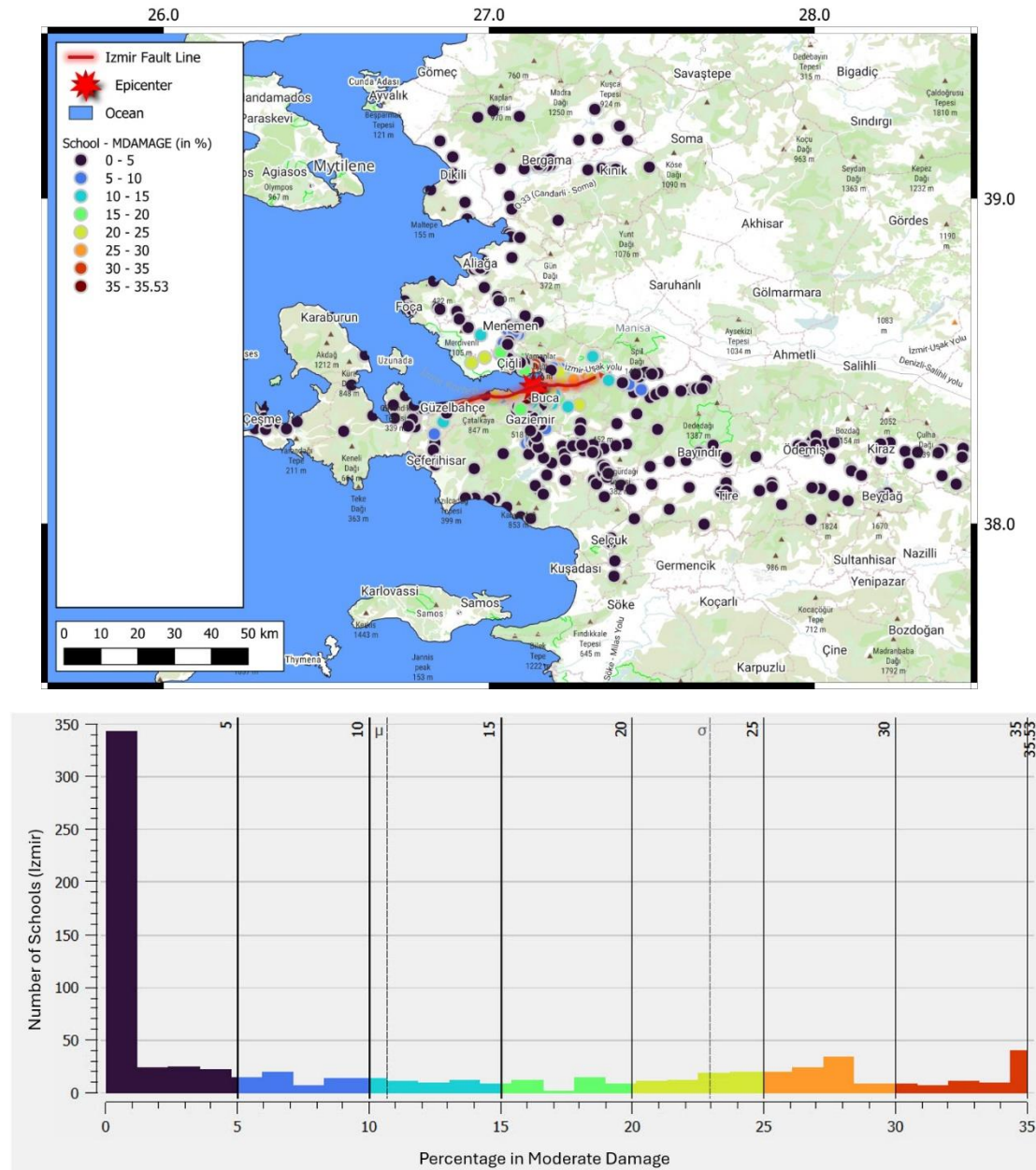


Figure 132. Izmir Scenario Earthquake Moderate Damage level distribution in School Buildings

This map indicates that the number of schools, which will incur only moderate damage of 0-5%, will be more than 350 schools, as shown by the dark purple dots. When the percentage of expected damage rises, then the number of affected schools drastically goes down; only a very few of them will be the ones to incur more than 30 percent damage. The histogram clearly shows that although the majority of schools face low risks of moderate damage, there remains a small but vital number with far higher risks.

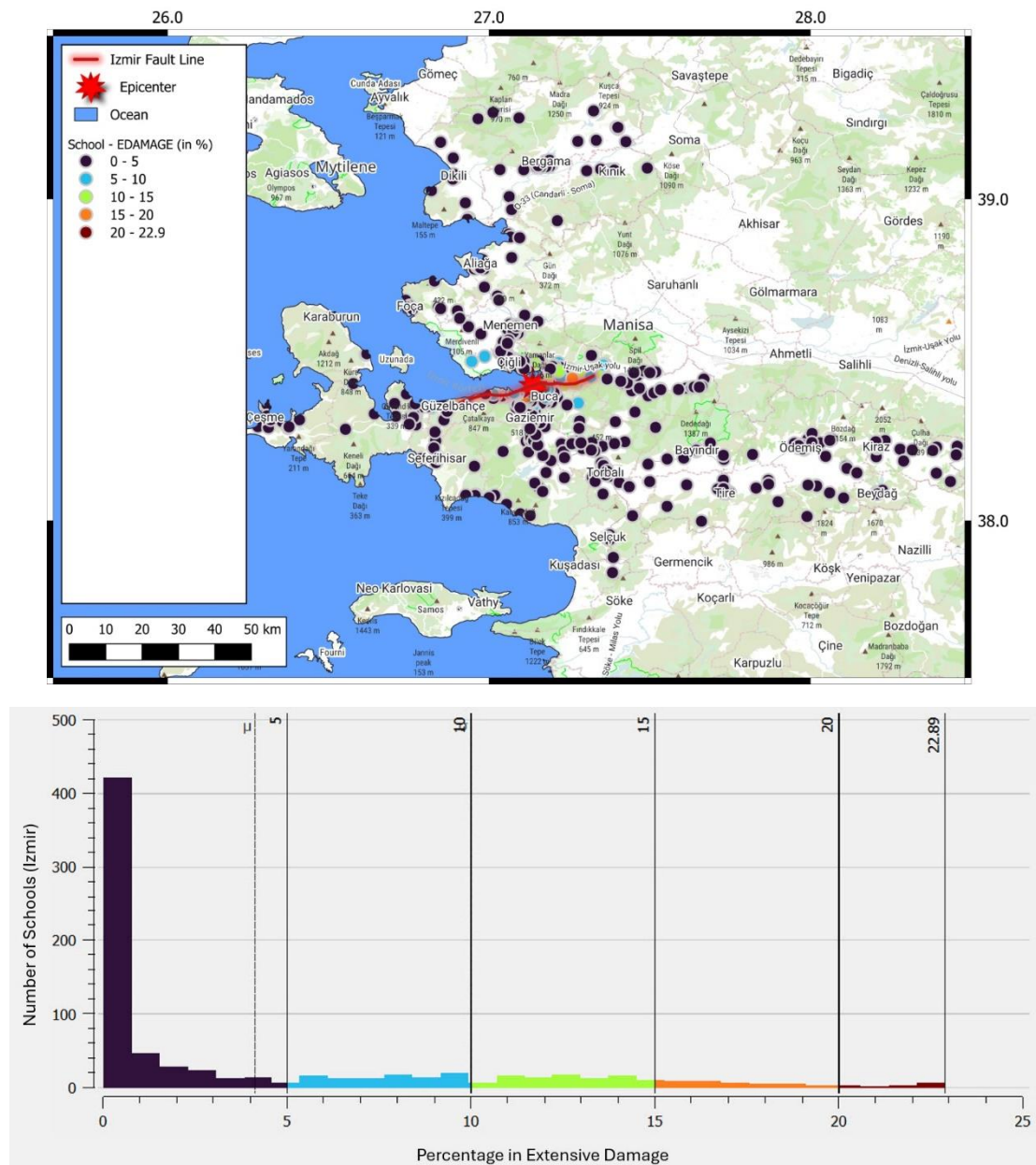


Figure 133. Izmir Scenario Earthquake Extensive Damage level distribution in School Buildings

It's predicted that more than 400 schools will sustain 0-5% extensive damage, which is equivalent to the dark purple dots on the map. A few schools are predicted to suffer more extensive damage, with very few reaching above 20%. The histogram shows the same concept as the moderate damage output, that the major damage is very highly concentrated in a few schools and minor in most others. In sharp contrast, a small number of schools are located in higher-risk areas most vulnerable to, and nearest to, a fault line and are therefore at higher risk of extensive damage.

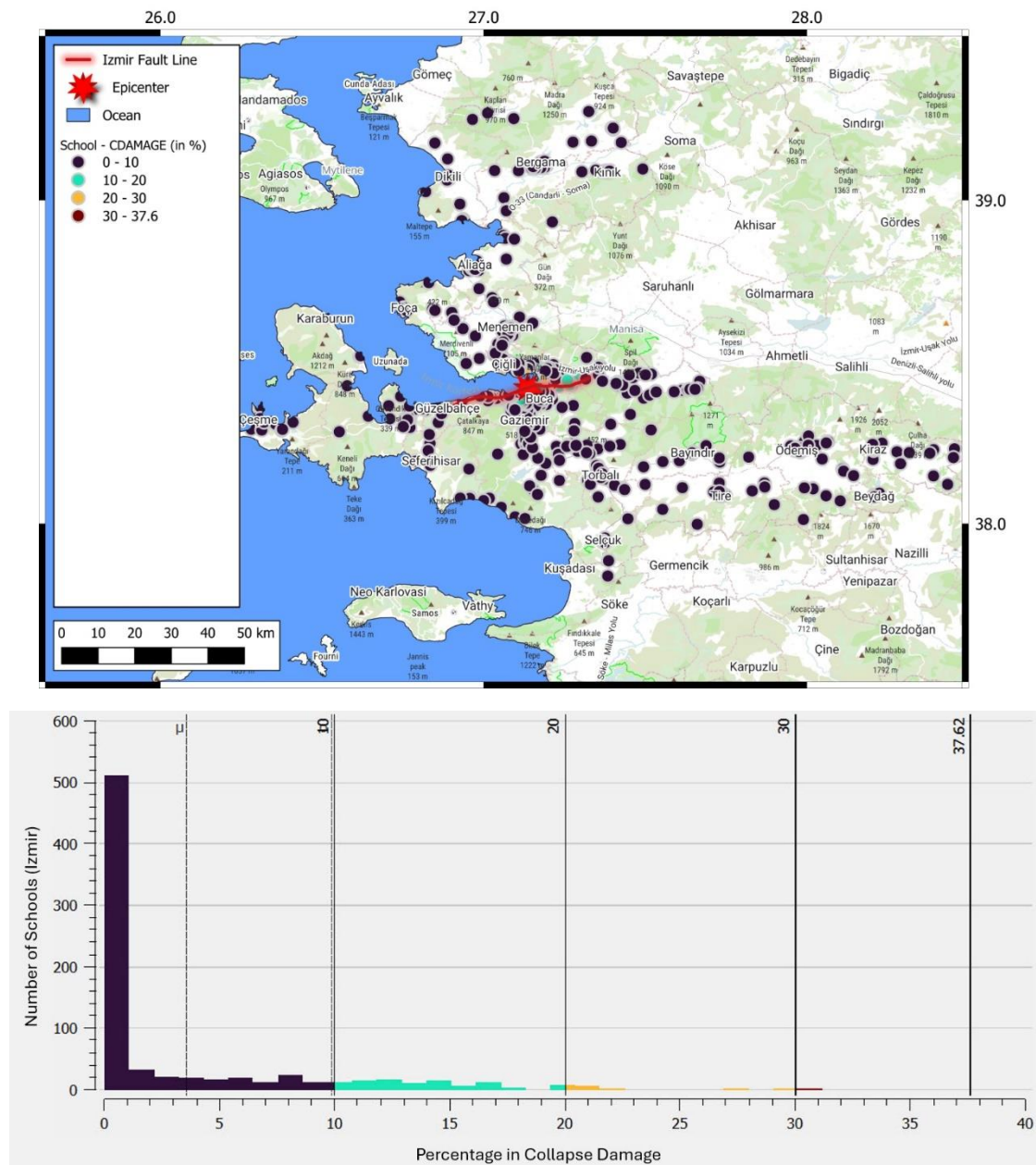


Figure 134. Izmir Scenario Earthquake Collapse Damage level distribution in School Buildings

A vast majority of schools are anticipated to experience 0-10% collapse damage (dark purple). Schools with higher percentages of collapse damage (yellow to red) are located predominantly along the Izmir Fault Line, particularly near Buca and Güzelbahçe. The histogram reveals that over 500 schools are predicted to have 0-10% collapse damage, as reflected by the dark purple dots on the map. A much smaller number of schools are anticipated to experience collapse damage percentages ranging between 10% to 37.6%. The histogram of damage distribution underscores that, while most schools may

experience only minimal risk, those with higher percentages of collapse damage are likely poised in much more vulnerable areas, particularly near the fault line. Some of the schools that would be considered at-risk schools may require retrofit efforts directed towards collapse risk mitigation from a major seismic event.

3.3.4 Discussion - Comparisons with observed data

The October 30, 2020 Mw7.0 Samos earthquake has been simulated as the scenario event. The observed damages in the school buildings have been discussed with the simulated ones.

The Deterministic Seismic Hazard Assessment (DSHA) maps for Samos site, have been generated for “cell” specific (0.005 x 0.005 degrees) Vs30 values, estimated by Stewart et al. 2014, based on the geology and slope gradient for five soil categories based on geologic age. In Figure 135 and Figure 136, the Samos Earthquake PGA and PGV distribution is given respectively including the cell-specific Vs,30 information.

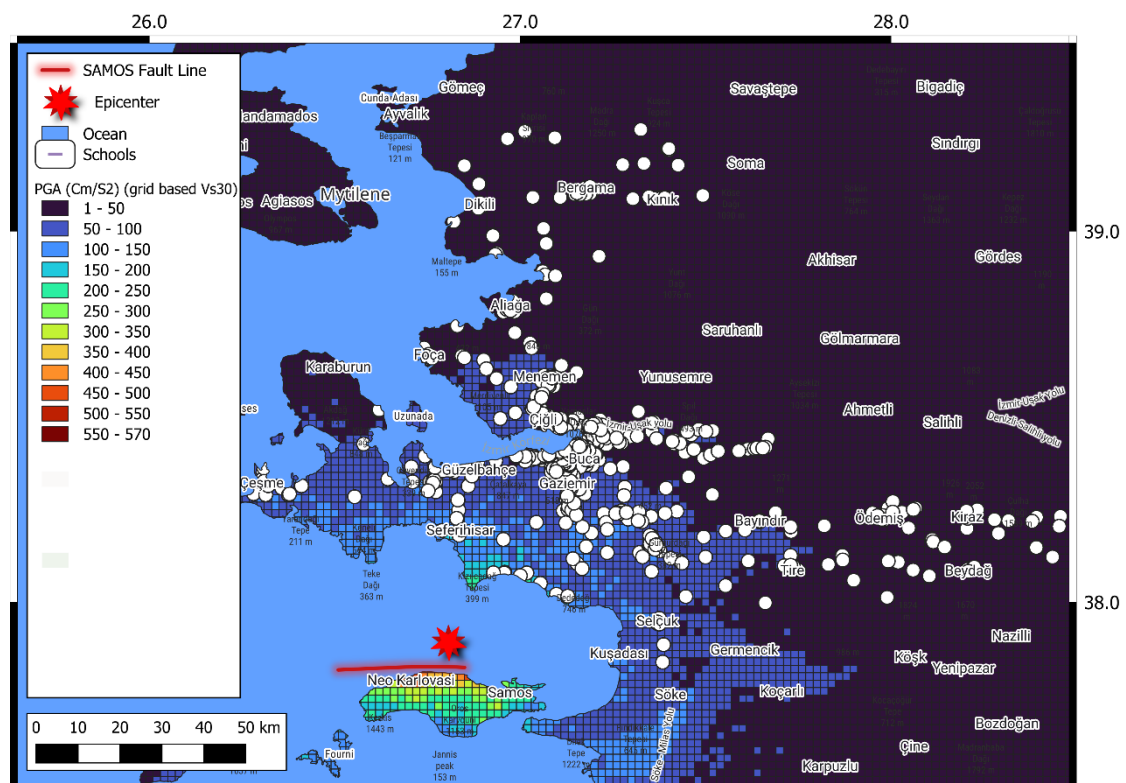


Figure 135. Samos Earthquake PGA distribution with School Buildings locations

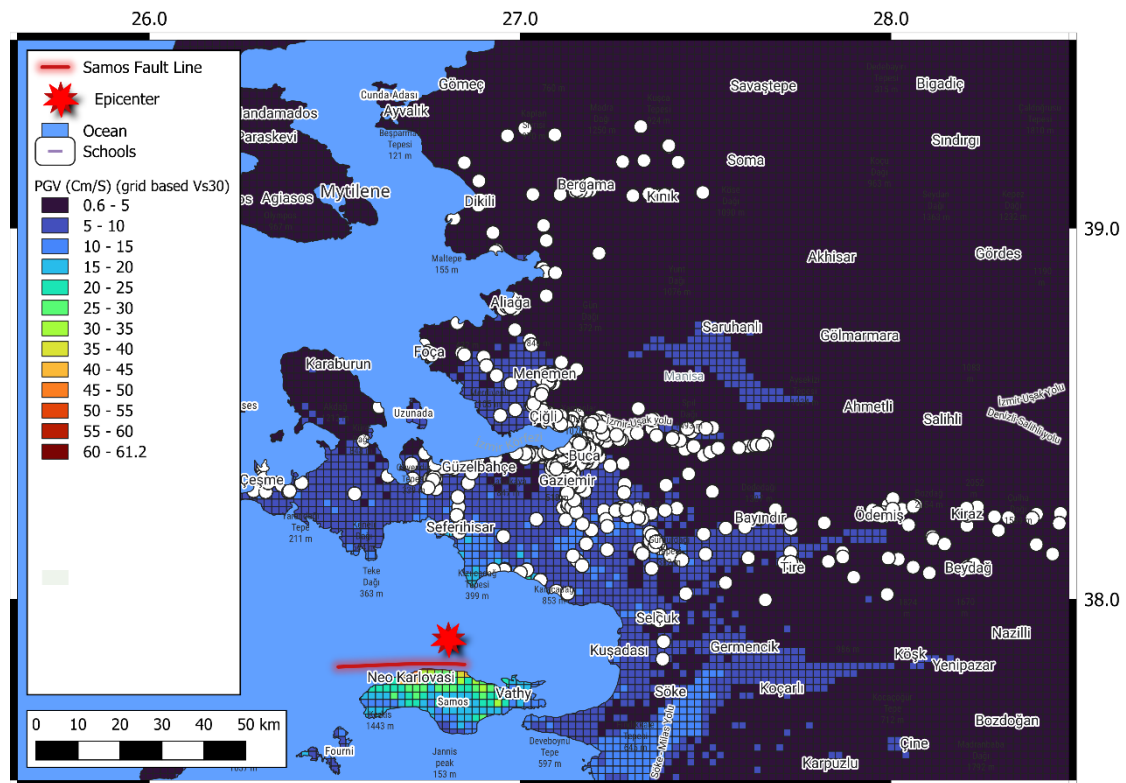


Figure 136. Samos Earthquake PGV distribution with School Buildings locations

Figure 137, Figure 138 and Figure 139 illustrate the results of the DSHA regarding Samos Earthquake with the distributions of Sa 0.3s, 0.6s and 1.0s respectively.

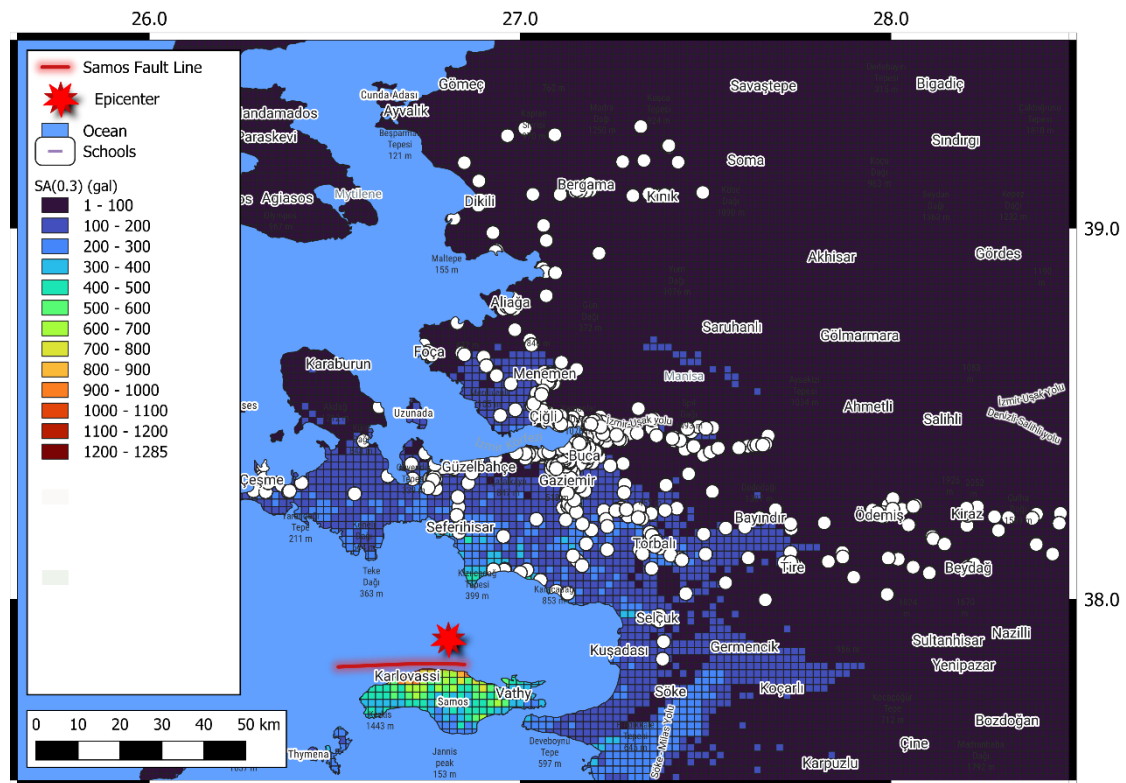


Figure 137. Samos Earthquake $S_a(0.3s)$ distribution with School Buildings locations

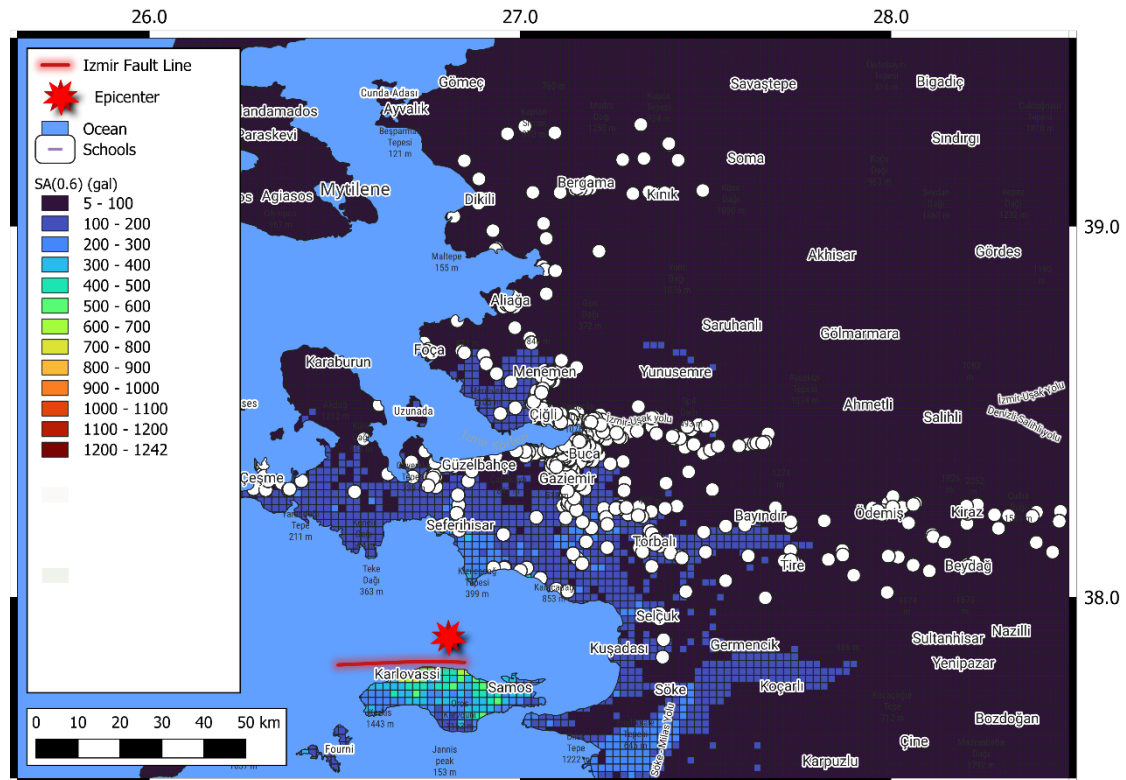


Figure 138. Samos Earthquake $S_a(0.6s)$ distribution with School Buildings locations

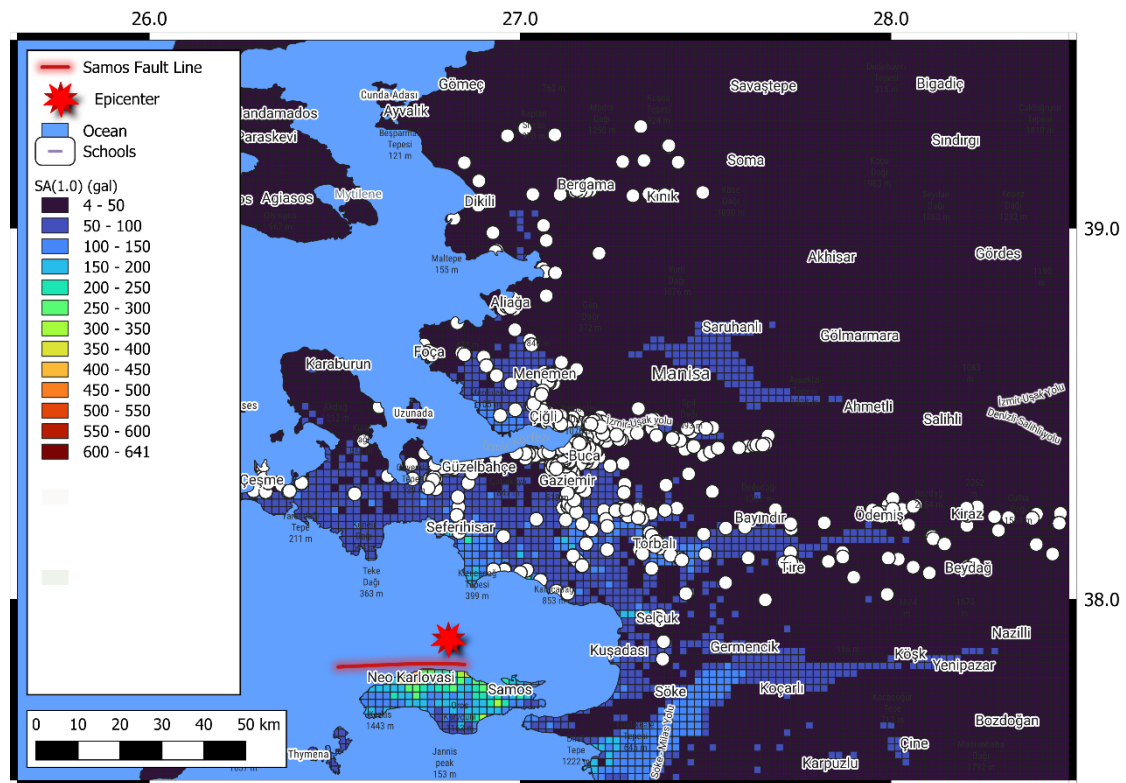


Figure 139. Samos Earthquake Sa(1.0s) distribution with School Buildings locations

The expected damage due to the scenario Samas Earthquake has been studied. Below, the figures between Figure 140 to Figure 143 presents the damage distribution in the school buildings throughout the province in the slight, moderate, extensive and collapse damage levels, respectively.

Earthquake Resilient Schools - EReS [BSB 966]
Project Nr: 101101206 (UCPM-2022-PP)
Deliverable D3.1: Joint assessment of seismic risk in the Greece- Türkiye CBA (school buildings in the pilot sites)

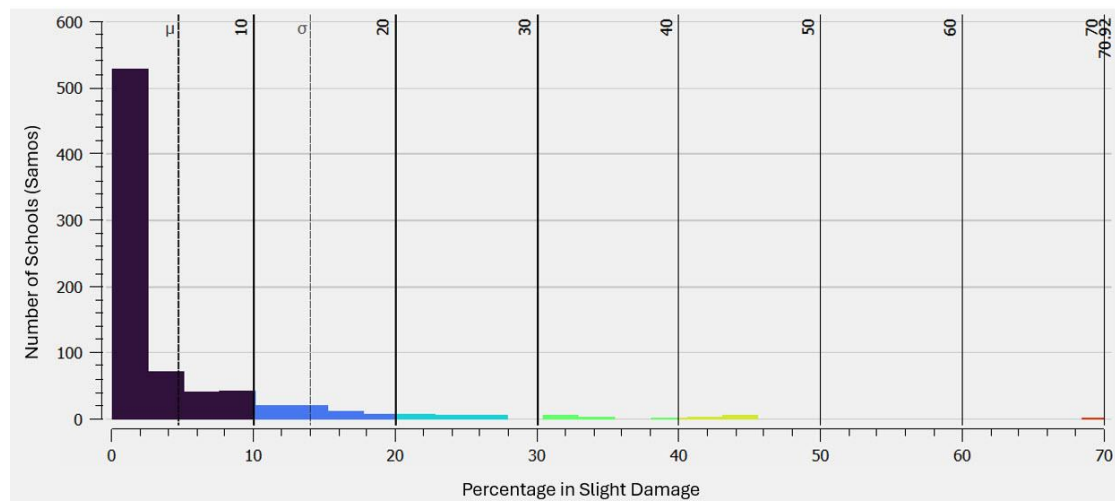
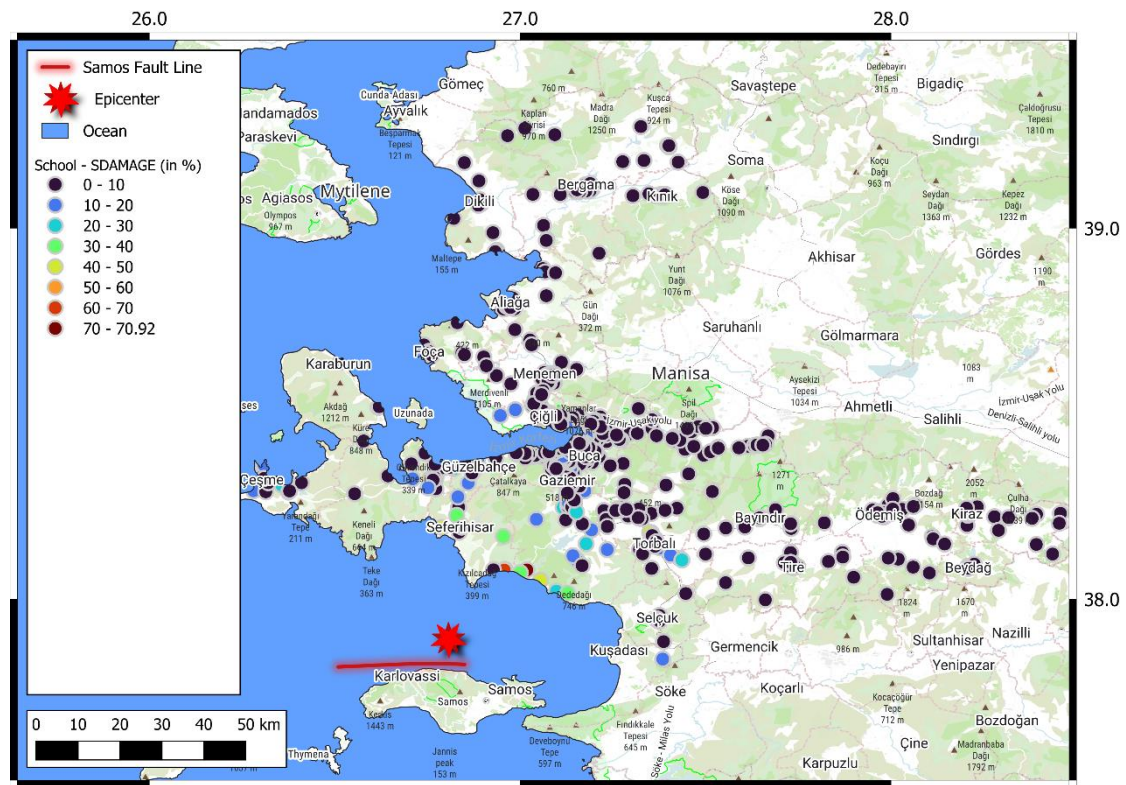


Figure 140. Samos Earthquake Slight Damage level distribution in School Buildings

Earthquake Resilient Schools - EReS [BSB 966]
Project Nr: 101101206 (UCPM-2022-PP)
Deliverable D3.1: Joint assessment of seismic risk in the Greece- Türkiye CBA (school buildings in the pilot sites)

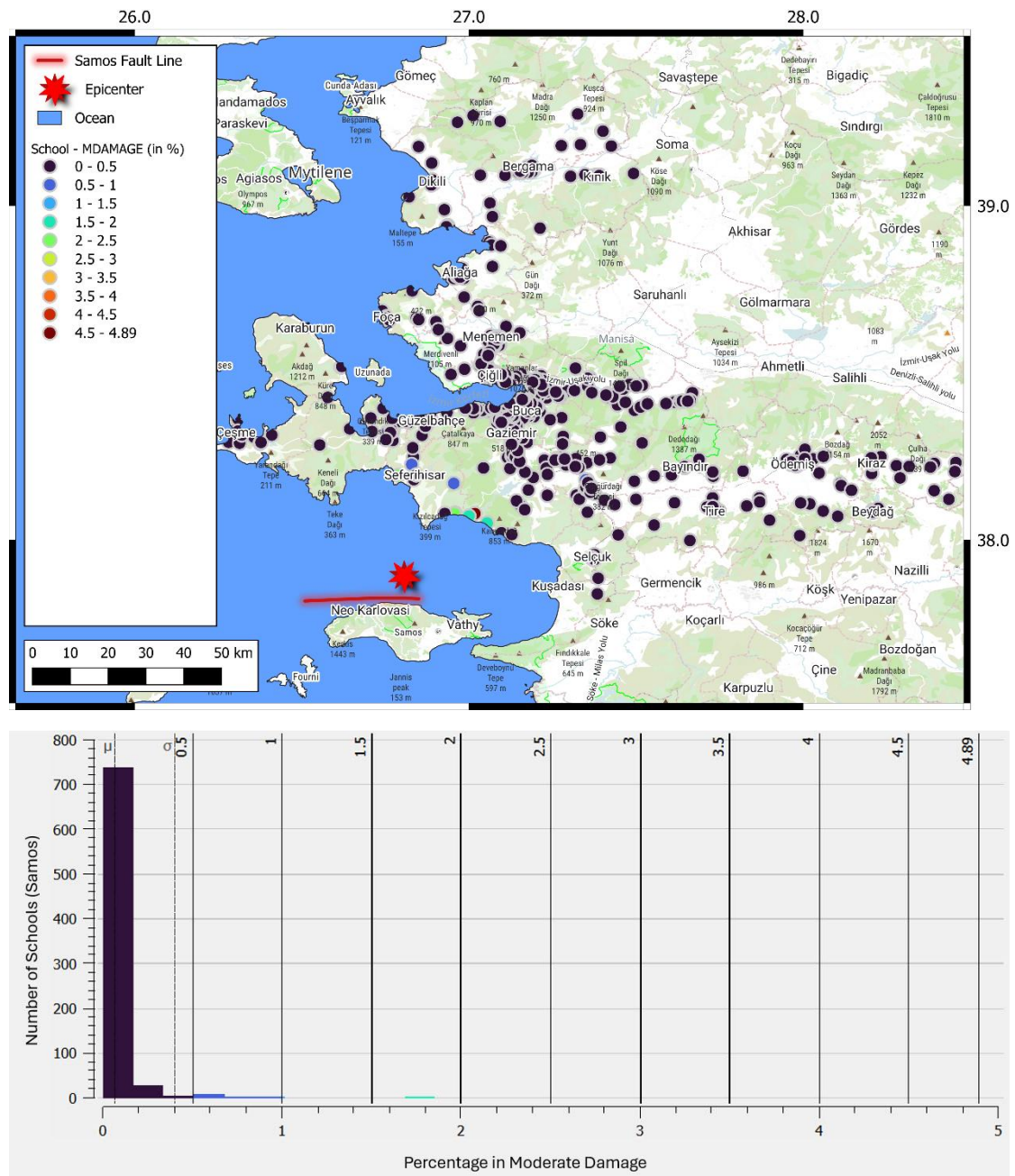


Figure 141. Samos Earthquake Moderate Damage level distribution in School Buildings

Earthquake Resilient Schools - EReS [BSB 966]
 Project Nr: 101101206 (UCPM-2022-PP)
 Deliverable D3.1: Joint assessment of seismic risk in the Greece- Türkiye CBA (school buildings in the pilot sites)

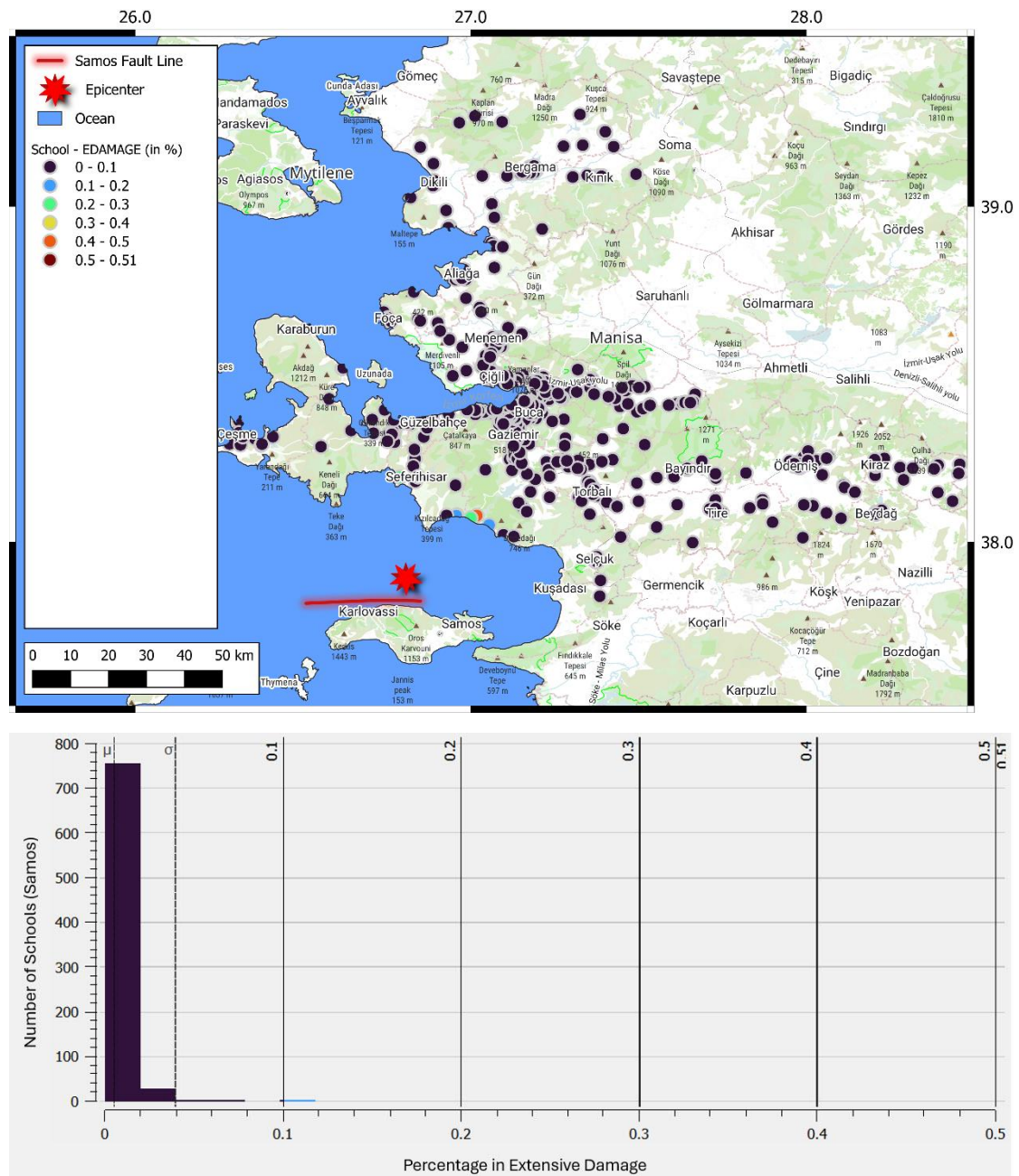


Figure 142. Samos Earthquake Extensive Damage level distribution in School Buildings

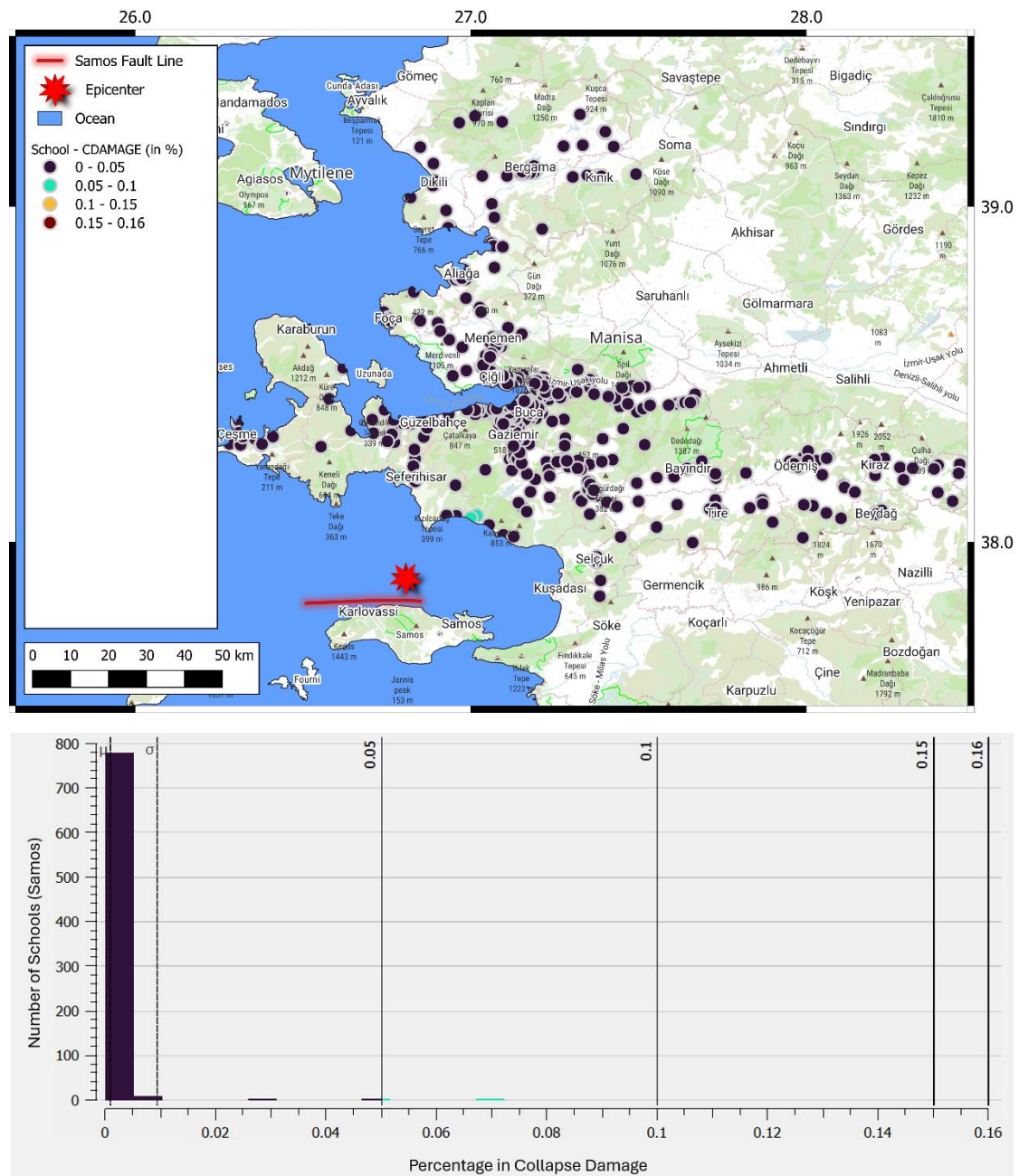


Figure 143. Samos Earthquake Collapse level distribution in School Buildings

The observed damages in İzmir province due to the Mw7.0 Samos Earthquake 2020 was studied by Cetin K.O., 2020. The observed damages in public buildings are given in Table 9. Accordingly, it is seen that almost 1% of the school buildings have severe damage and 2% of the school buildings have moderate damage.

According to the simulations based on the Mw7.0 scenario Samos earthquake, it is seen that the average damage ratio for the slight and moderate damage

levels is around 2% and also the average damage ratio for the extensive and collapse damage levels is less than 1%.

Table 9. Observed damages in the public buildings in İzmir Province due to the 2020 Samos Earthquake (Cetin et al., 2020)

Damage Assessment of Public Buildings			
	School	Mosque	Other Public Buildings
Total Assessment #	1810	517	1919
# of Severely Damaged Buildings	18	10	20
# of Moderately Damaged Buildings	33	18	23

3.4 CANAKKALE

3.4.1 School building stock

The list of the school buildings located in Çanakkale province were given in the D3.1 deliverable. The updated list and statistical distribution of the school buildings are given in this report in the Annex-A. Six of the school buildings have been selected as the pilot schools to be instrumented with the NGA devices. The distribution of the pilot schools is presented in Figure 144.

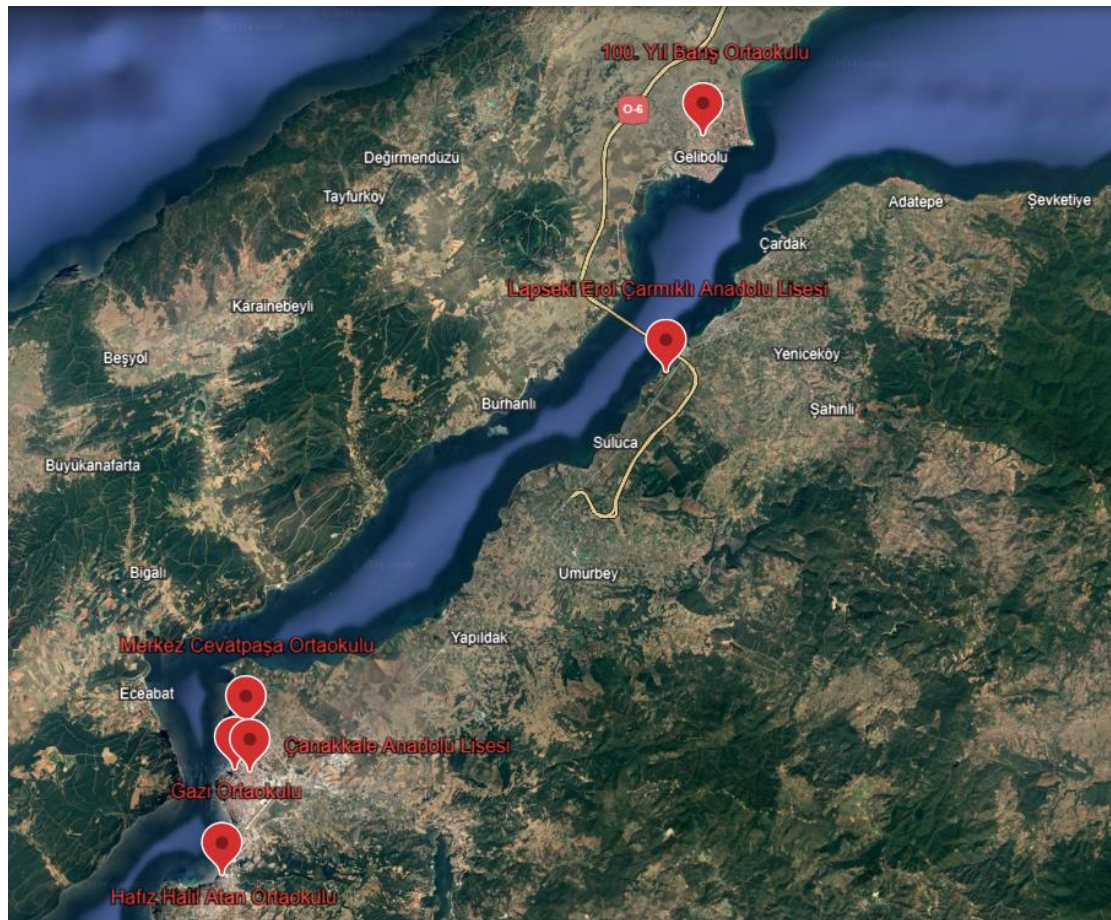


Figure 144. Geographical distribution of the pilot schools with different soil conditions in Çanakkale province.

Table 10 tabulates the general characteristics of the pilot schools in Çanakkale. The google map view, geographical coordinates and photo of the building taken during the site investigation are also presented in the Figure 145 to Figure 150 separately.

Table 10. Schools selected in the first stage in Çanakkale province.

School Name	District	Construction Year	Structural System	# of Stories	Geology
Gelibolu 100.Yıl Barış OrtaOkulu	Gelibolu	2015	RC-MF-w-SW	3	Kiltaşı
Lapseki Erol Çarmıklı Anadolu Lisesi	LAPSEKİ	2021	RC-MF-w-SW	4	Kumtaşı-Çamurtaşı-Kireçtaşı
Merkez Cevat Paşa OrtaOkulu	Merkez	2011	RC-MF-w-SW	4	Çakıltaşı-Kumtaşı-Çamurtaşı
Gazi OrtaOkulu	Merkez	2022	RC-MF-w-SW	2	Alüvyon
Çanakkale Anadolu Lisesi	Merkez	1982	RC-Infill Wall	4	Alüvyon
Kepez Hafız Halil Atan Ortaokul	Kepez	2018	RC-MF-w-SW	3	Alüvyon-Çakıltaşı-Kumtaşı-Çamurtaşı

i. Gelibolu 100. Yıl Barış Ortaokulu

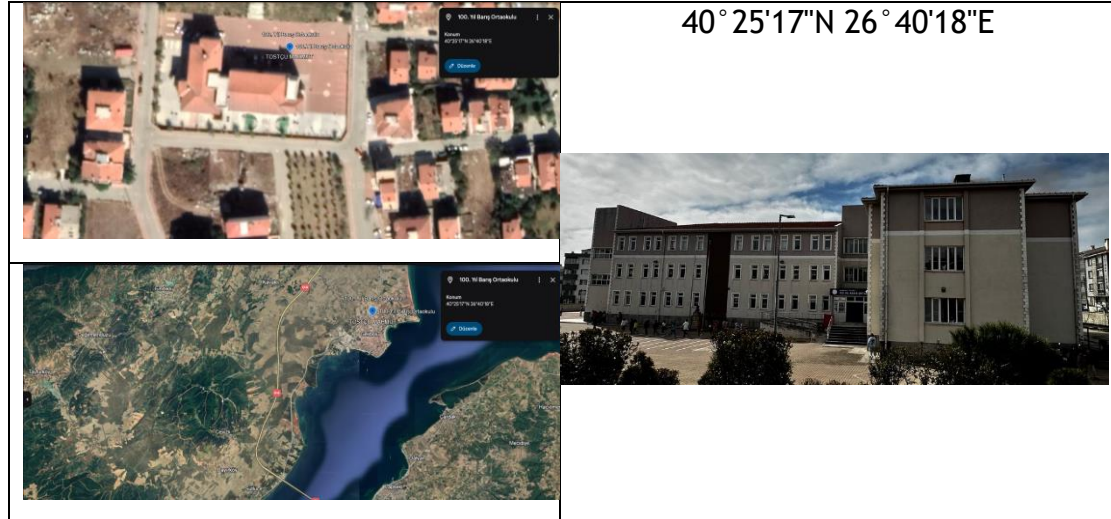


Figure 145. Google map view, geographical coordinates and a general photo of Gelibolu 100. Yıl Barış Ortaokulu.

ii. Lapseki Erol Çarmıklı Anadolu Lisesi



Figure 146. Google map view, geographical coordinates and a general photo of Lapseki Erol Çarmıklı Anadolu Lisesi.

iii. Cevatpaşa Ortaokulu



Figure 147. Google map view, geographical coordinates and a general photo of Cevatpaşa Ortaokulu.

iv. Gazi Ortaokulu



Figure 148. Google map view, geographical coordinates and a general photo of Gazi Ortaokulu.

v. Çanakkale Anadolu Lisesi



Figure 149. Google map view, geographical coordinates and a general photo of Çanakkale Anadolu Lisesi.

vi. **Kepez Hafız Halil Atan Ortaokulu**



Figure 150. Google map view, geographical coordinates and a general photo of Kepez Hafız Halil Atan Ortaokulu.

3.4.2 Hazard scenarios

The PSHA and DSHA have been studied and presented for the CBA including İzmir and Çanakkale provinces in the Deliverable 2.2. In this deliverable, the ground motion distributions with 100 years of return period for PSHA analysis and for DSHA are presented for Çanakkale province.

In Figure 151 to Figure 155 the PSHA ground motion distributions for PGA, PGV, Sa0.3s, Sa0.6s and Sa1.0s are given.

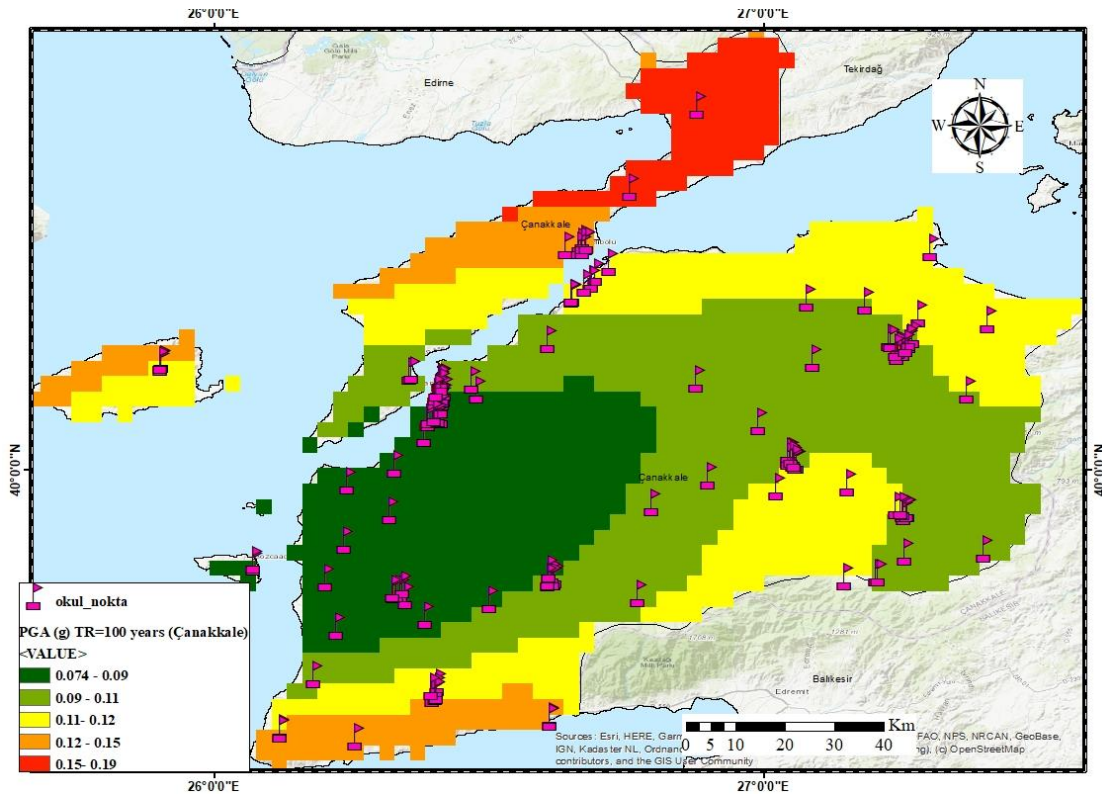


Figure 151. Canakkale province PSHA with 100 years return period PGA distribution with School Buildings locations

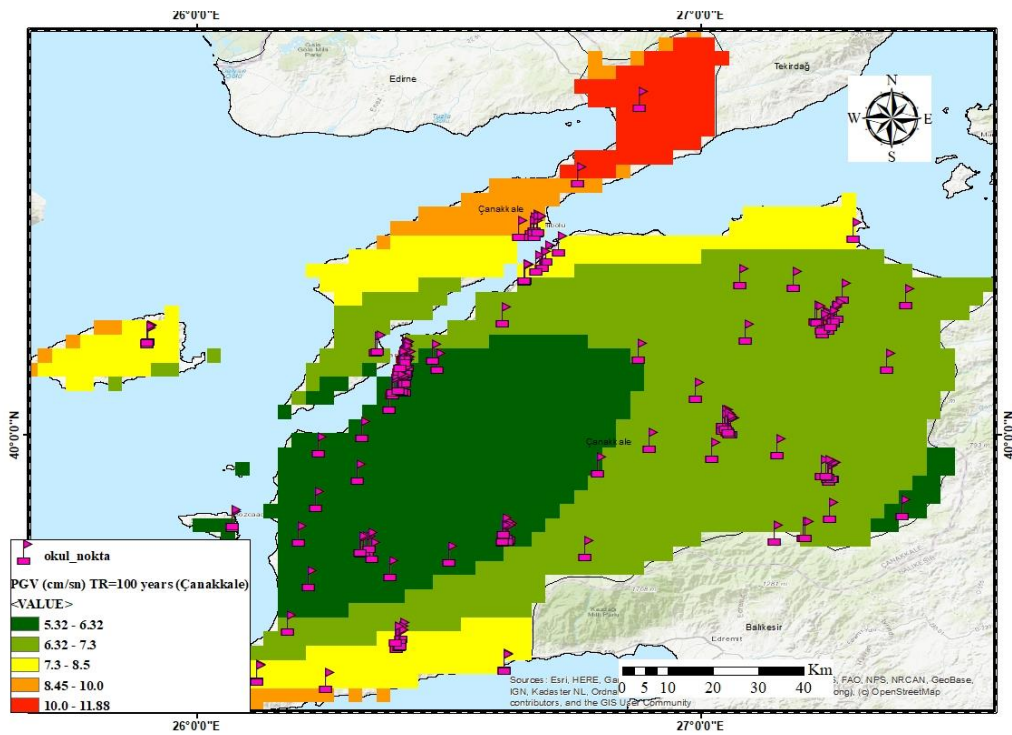


Figure 152. Canakkale province PSHA with 100 years return period PGV distribution with School Buildings locations

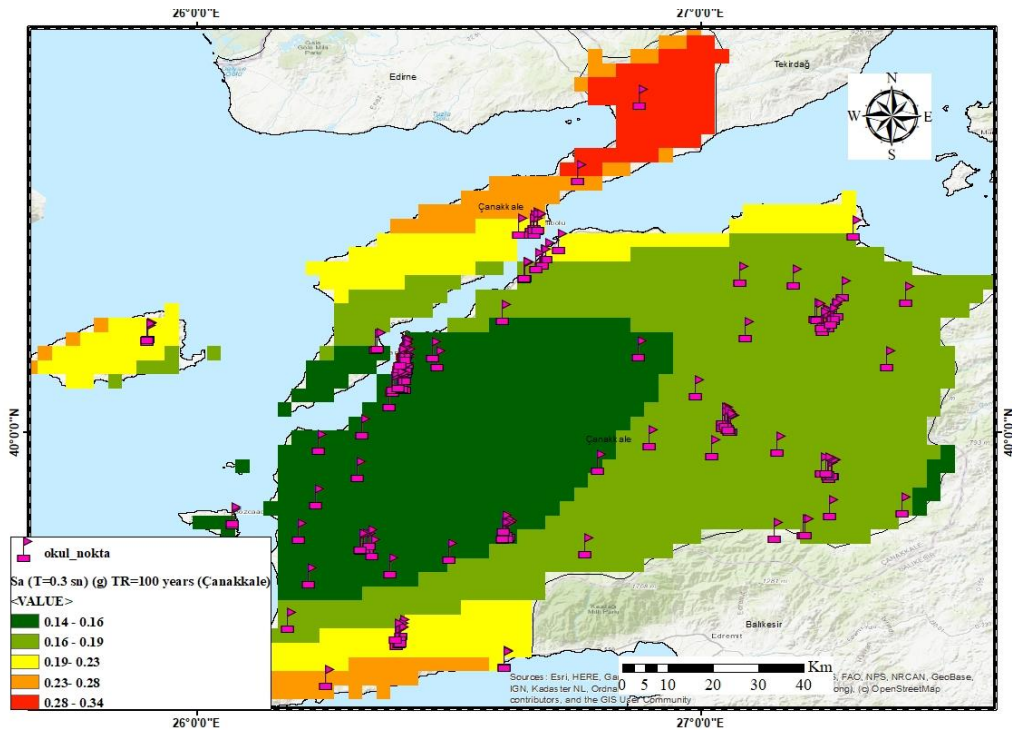


Figure 153. Çanakkale province PSHA with 100 years return period $Sa(T=0.3s)$ distribution with School Buildings locations

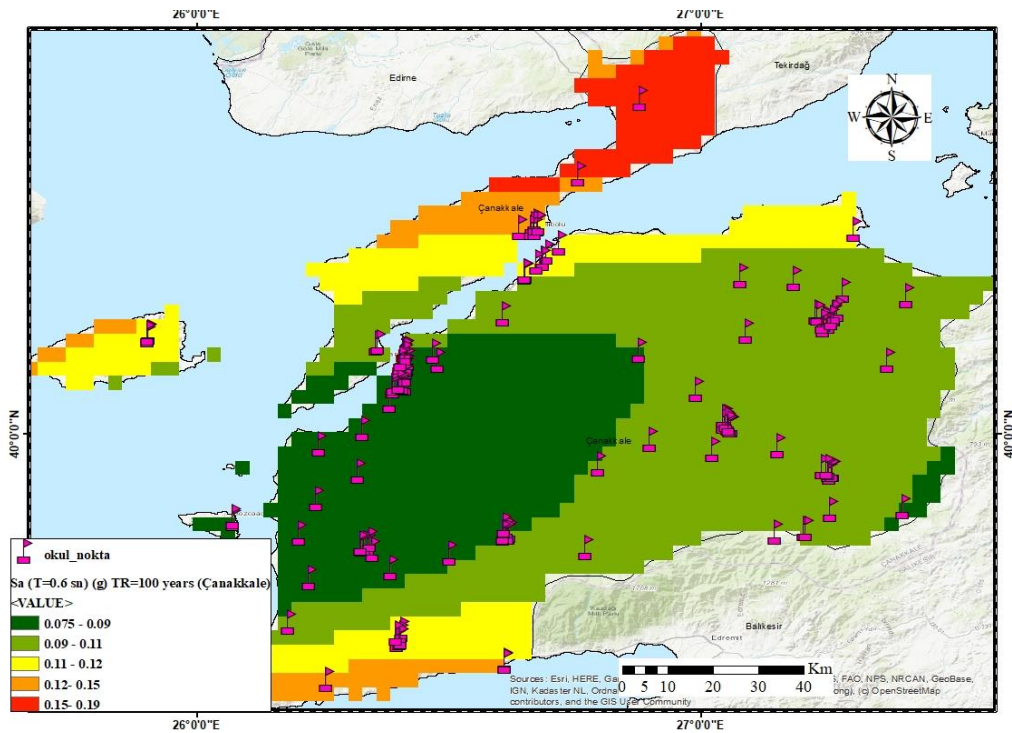


Figure 154. Çanakkale province PSHA with 100 years return period $Sa(T=0.6s)$ distribution with School Buildings locations

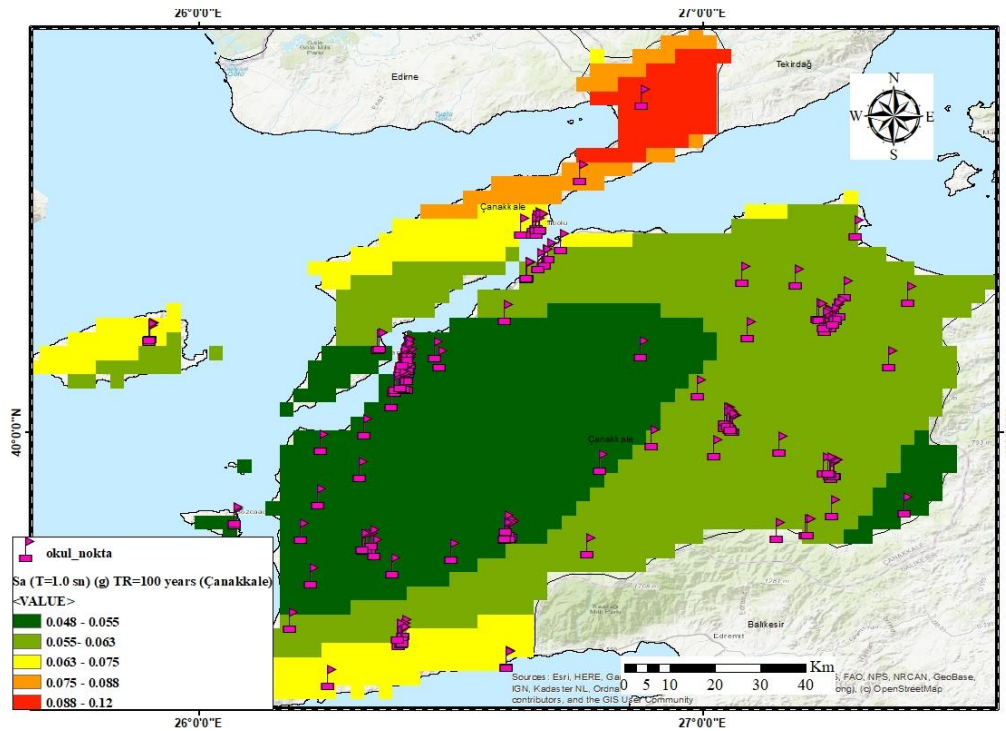


Figure 155. Çanakkale province PSHA with 100 years return period $S_a(T=1.0s)$ distribution with School Buildings locations

The Deterministic Seismic Hazard Assessment (DSHA) maps for Çanakkale site, have been generated for the so-called near-field (< 50 km) seismic fault-sources per site, with a potential of generating high magnitude earthquakes ($M > 6.5$) and causing high Peak Ground Acceleration (PGA) values (e.g. > 0.1 g). Çanakkale scenario earthquake and the location of the schools is presented in Figure 156.

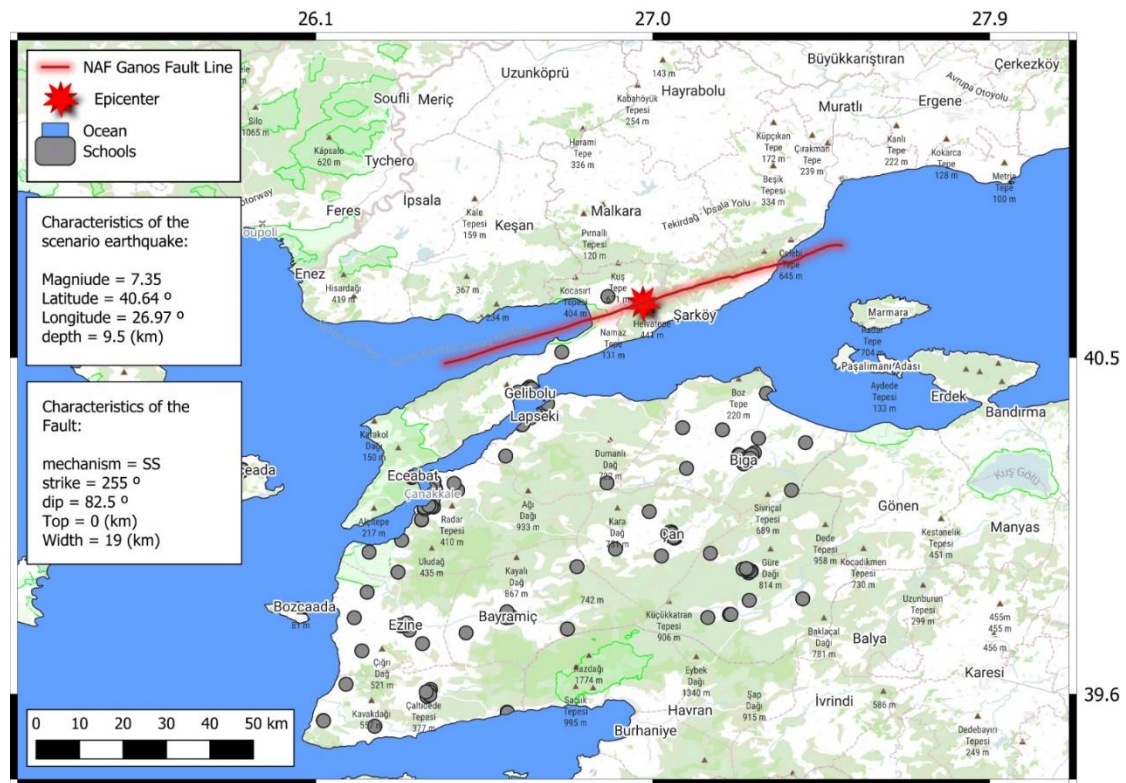


Figure 156. Canakkale Scenario Earthquake

Moreover, the DSHA maps have been produced for “cell” specific (0.005 x 0.005 degrees) Vs30 values, estimated by Stewart et al. 2014, based on the geology and slope gradient for five soil categories based on geologic age. In Figure 157 and Figure 158, the Çanakkale Scenario Earthquake PGA and PGV distribution is given respectively including the cell-specific Vs,30 information.

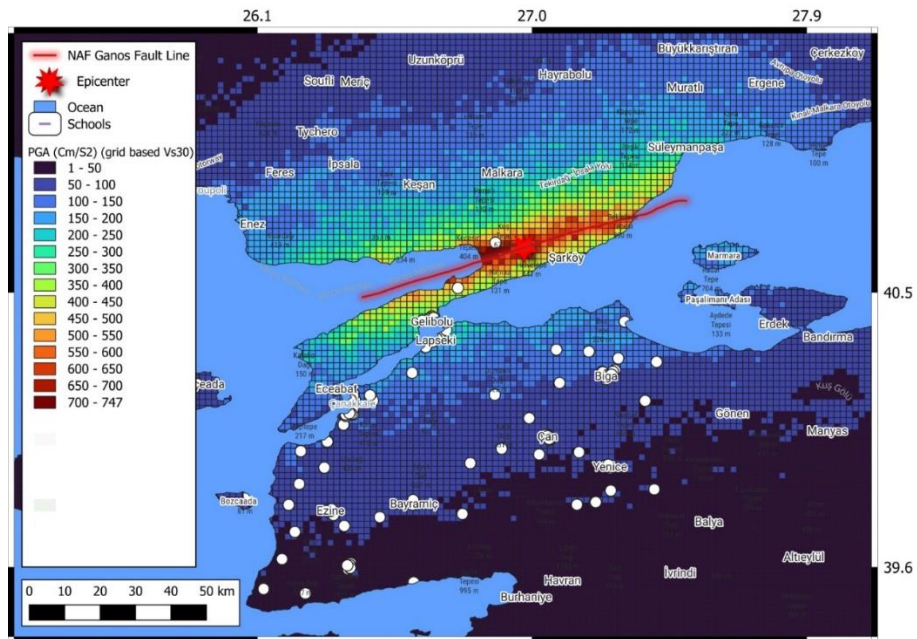


Figure 157. Canakkale Scenario Earthquake PGA distribution with School Buildings locations

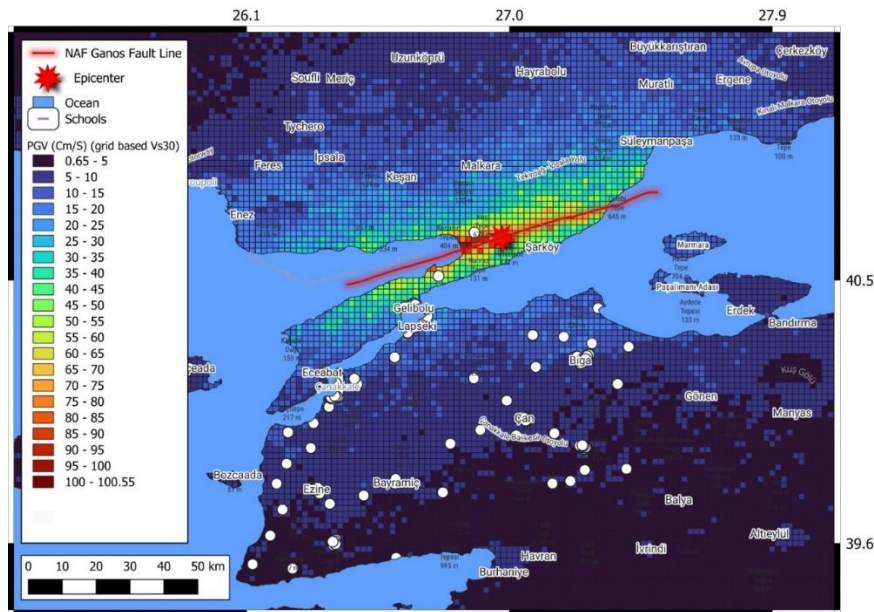


Figure 158. Canakkale Scenario Earthquake PGV distribution with School Buildings locations

Figure 159, Figure 160 and Figure 161 illustrates the results of the DSHA regarding Çanakkale Scenario Earthquake with the distributions of S_a 0.3s, 0.6s and 1.0s respectively.

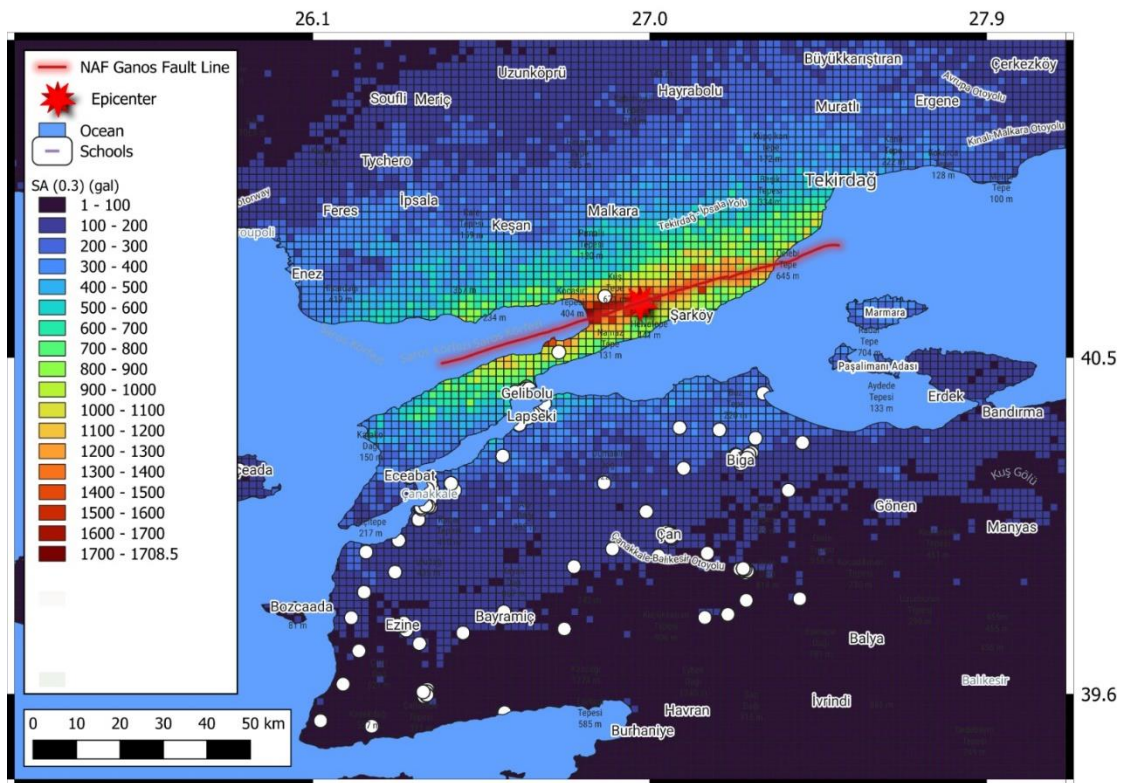


Figure 159. Canakkale Scenario Earthquake Sa(0.3s) distribution with School Buildings locations

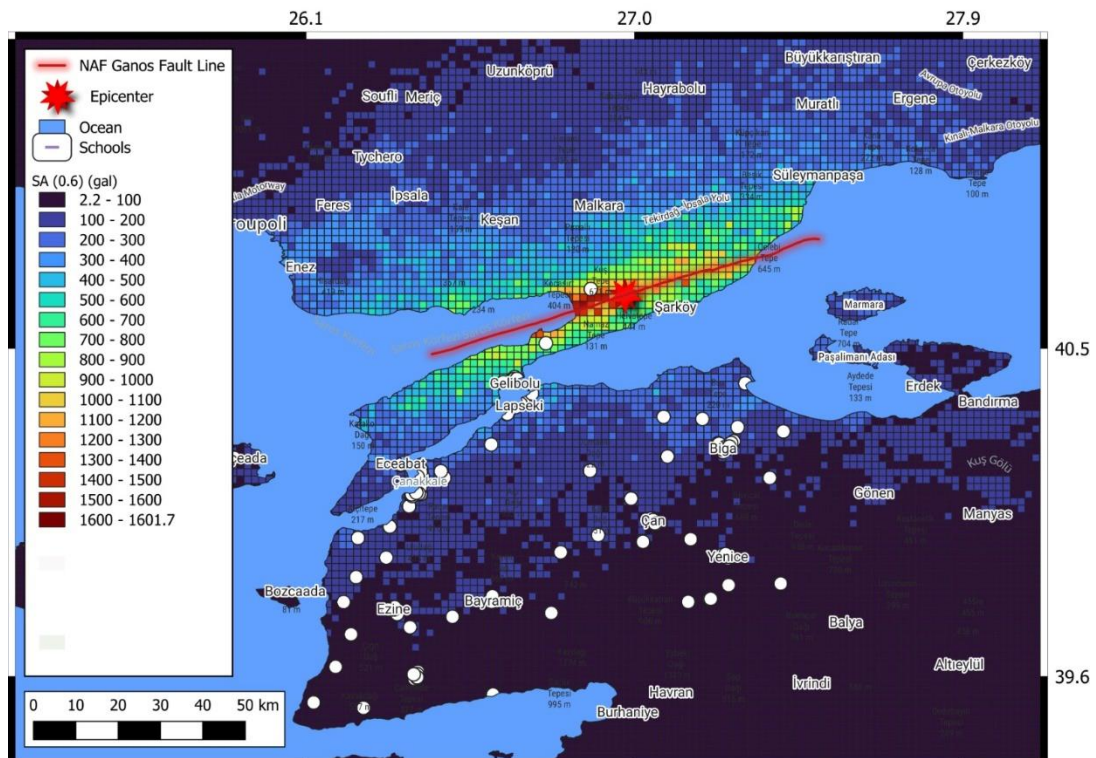


Figure 160. Canakkale Scenario Earthquake Sa(0.6s) distribution with School Buildings locations

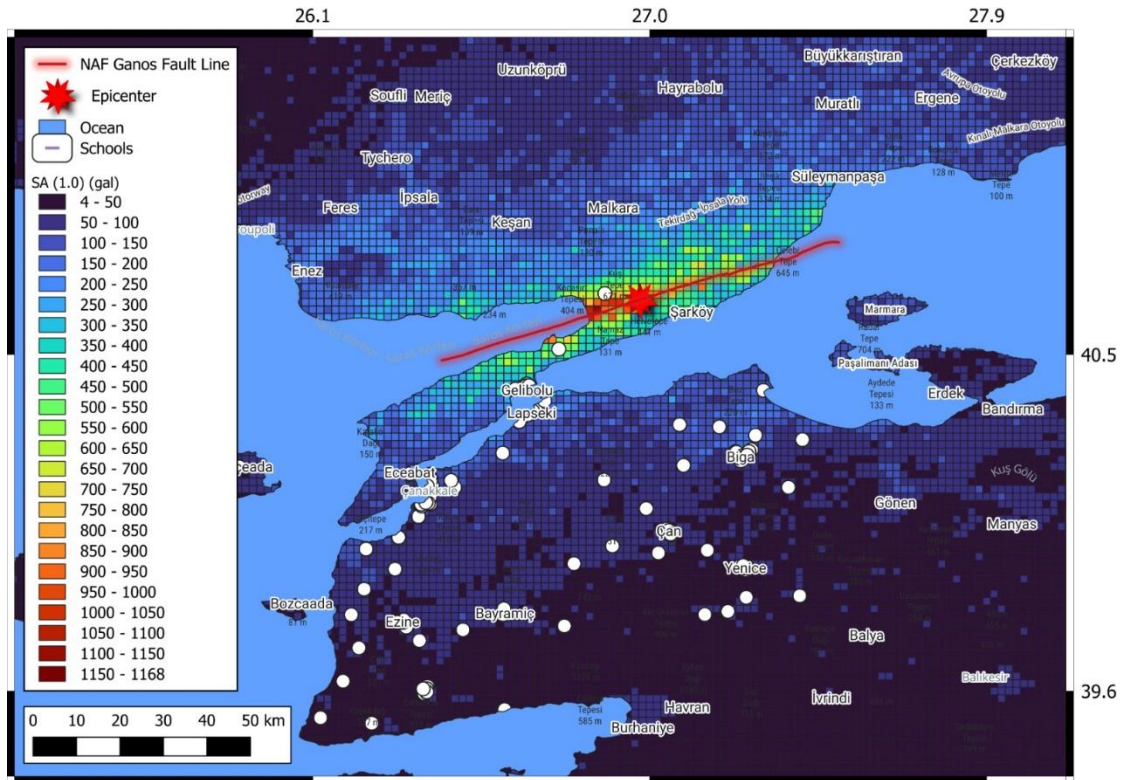


Figure 161. Canakkale Scenario Earthquake Sa(1.0s) distribution with School Buildings locations

3.4.3 Damage estimation

The Probabilistic Seismic Hazard Assessment (PSHA) maps for Çanakkale site, have been generated for a recurrence period of 100, 475 and 950 years and presented in Figures 162-173.

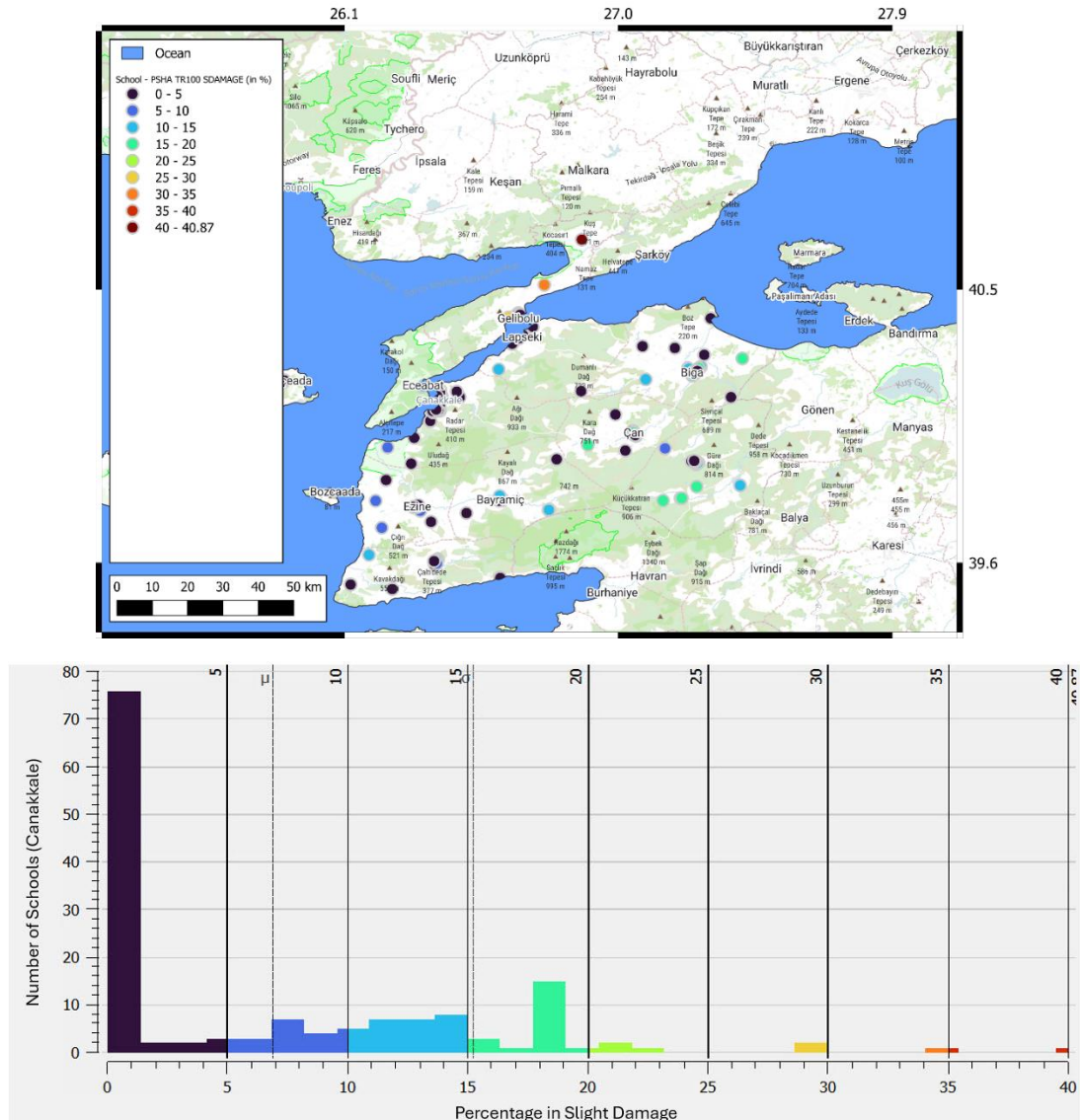


Figure 162. Çanakkale PSHA Results with 100 years return period _Slight Damage level distribution in School Buildings

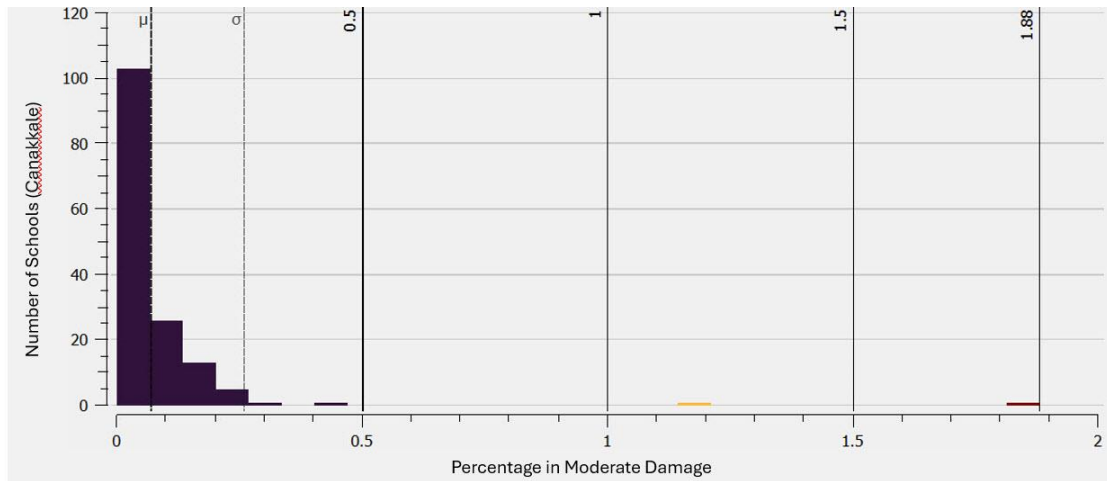


Figure 163. Çanakkale PSHA Results with 100 years return period _Moderate Damage level distribution in School Buildings

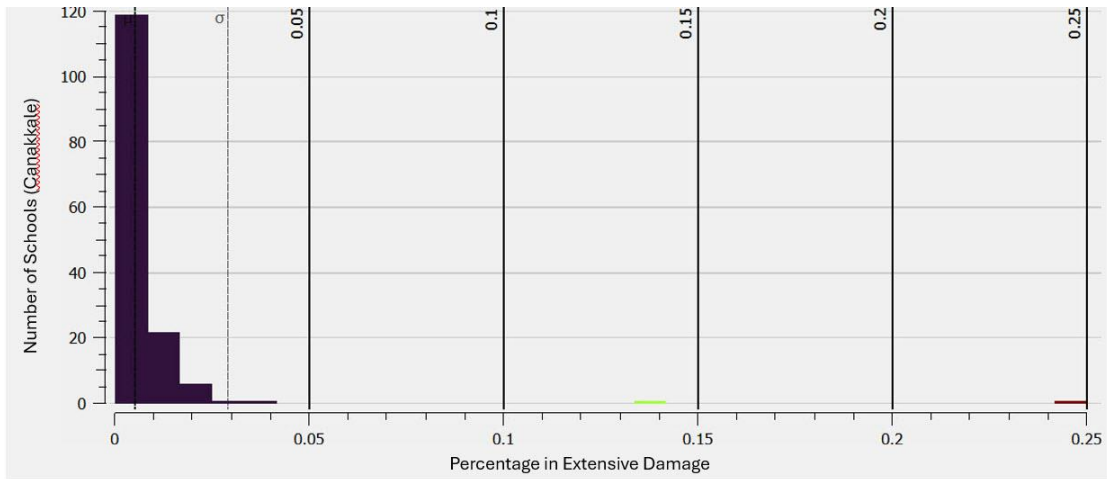


Figure 164. Çanakkale PSHA Results with 100 years return period _Extensive Damage level distribution in School Buildings

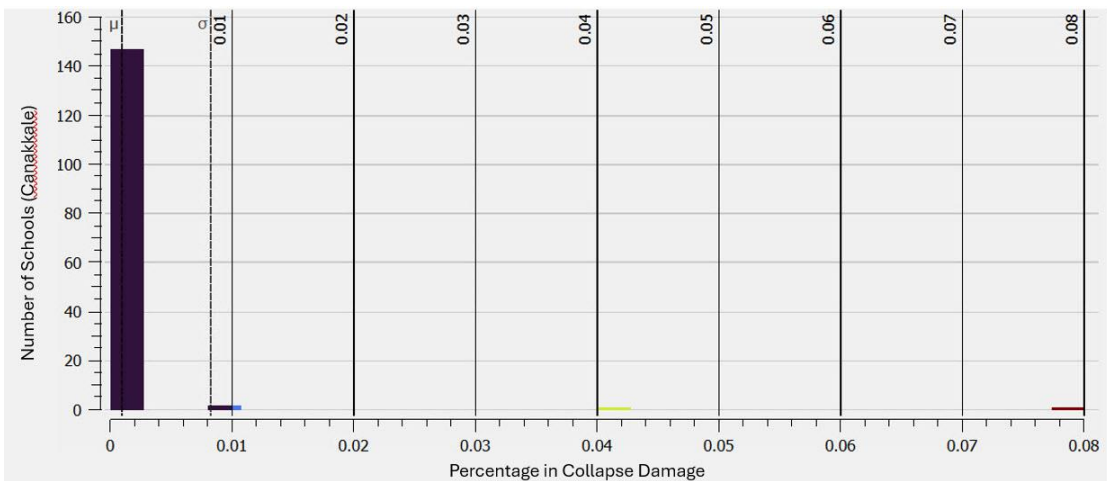


Figure 165. Çanakkale PSHA Results with 100 years return period _Collapse level distribution in School Buildings

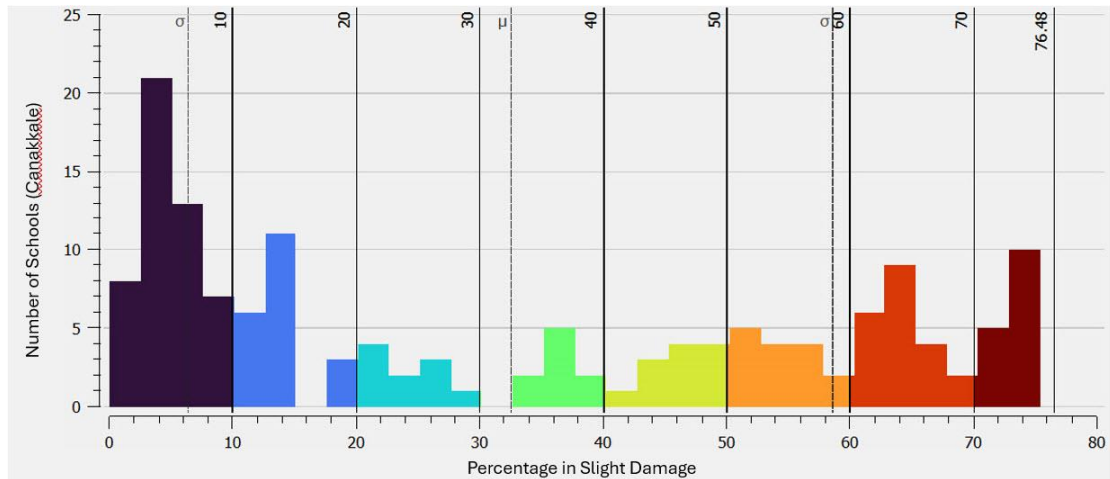


Figure 166. Çanakkale PSHA Results with 475 years return period _Slight Damage level distribution in School Buildings

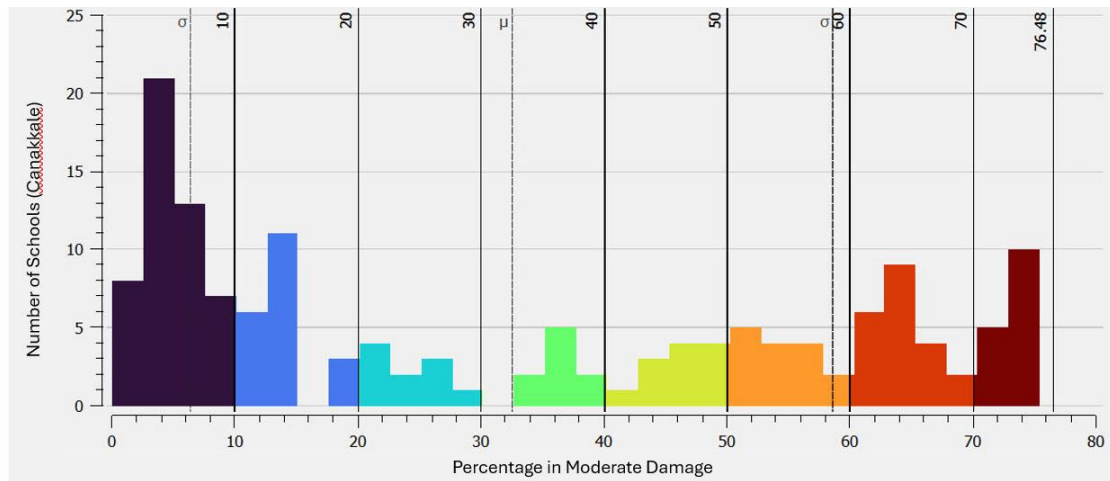


Figure 167. Çanakkale PSHA Results with 475 years return period _Moderate Damage level distribution in School Buildings

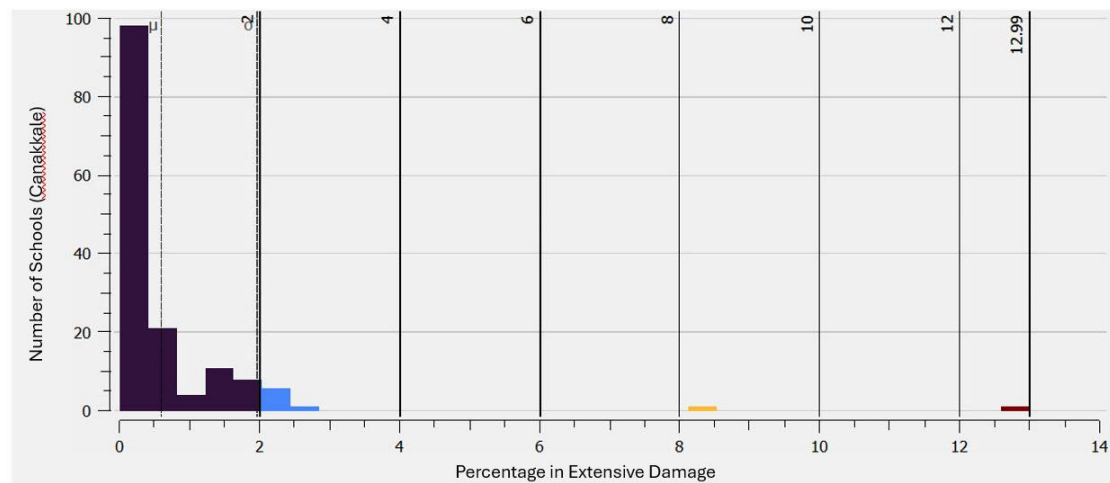


Figure 168. Çanakkale PSHA Results with 475 years return period _Extensive Damage level distribution in School Buildings

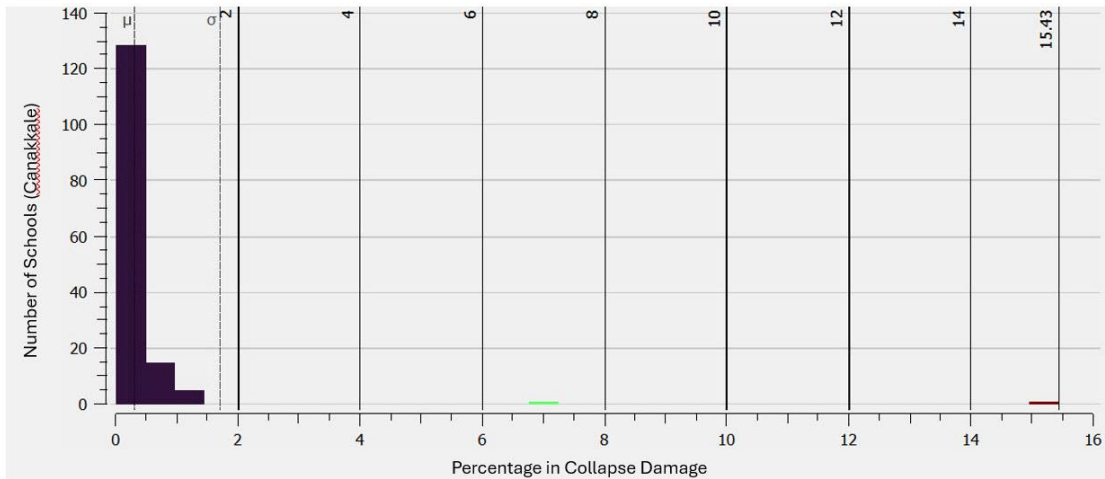


Figure 169. Çanakkale PSHA Results with 475 years return period _Collapse level distribution in School Buildings

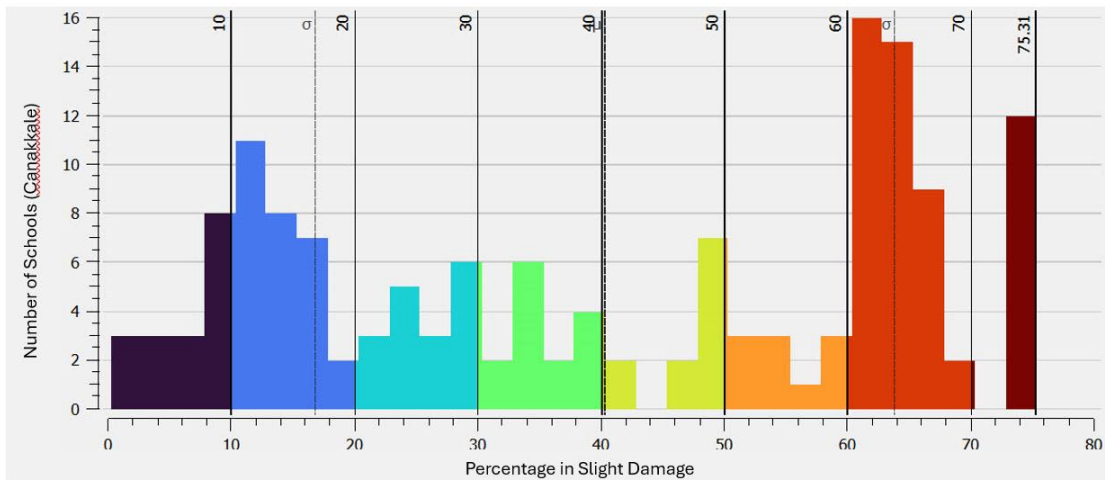


Figure 170. Çanakkale PSHA Results with 950 years return period _Slight Damage level distribution in School Buildings

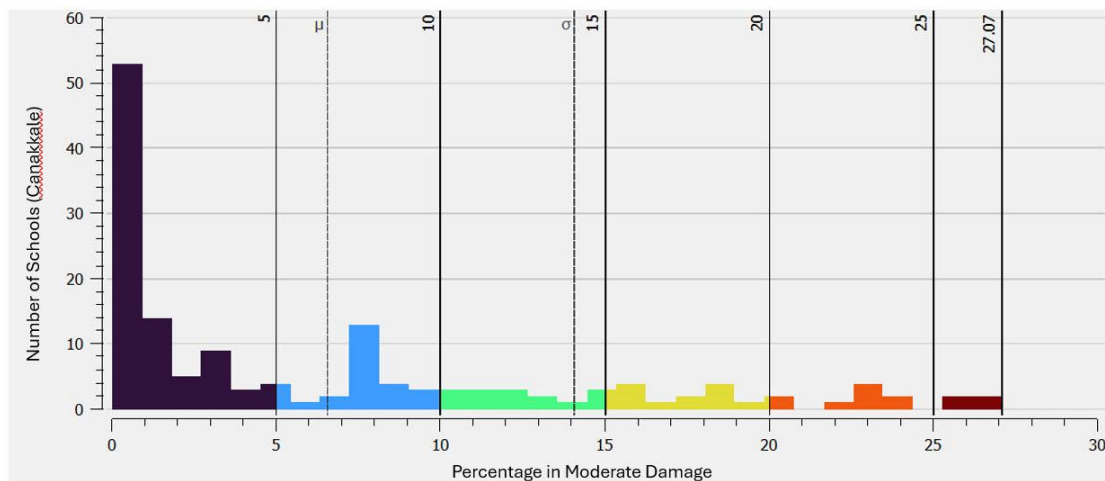


Figure 171. Çanakkale PSHA Results with 950 years return period _Moderate Damage level distribution in School Buildings

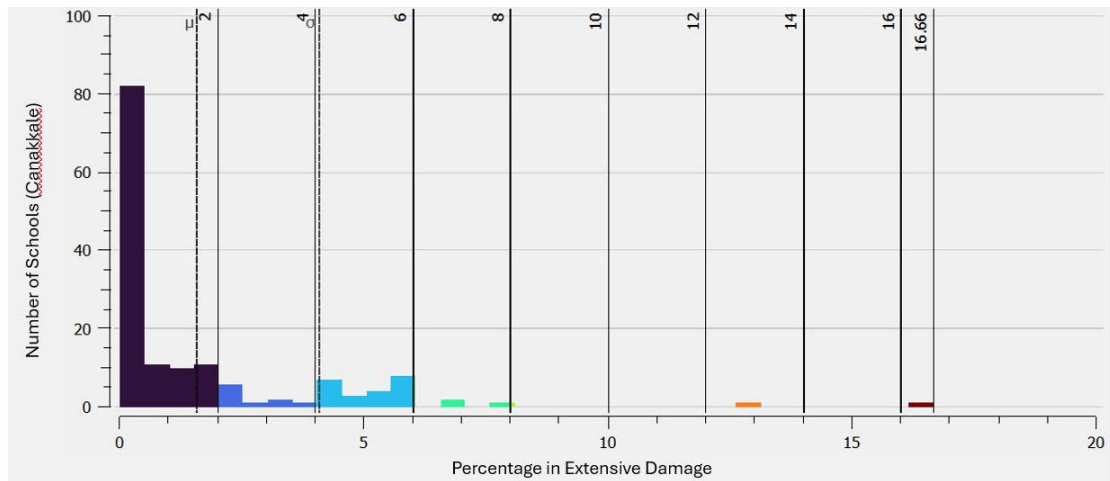


Figure 172. Çanakkale PSHA Results with 950 years return period _Extensive Damage level distribution in School Buildings

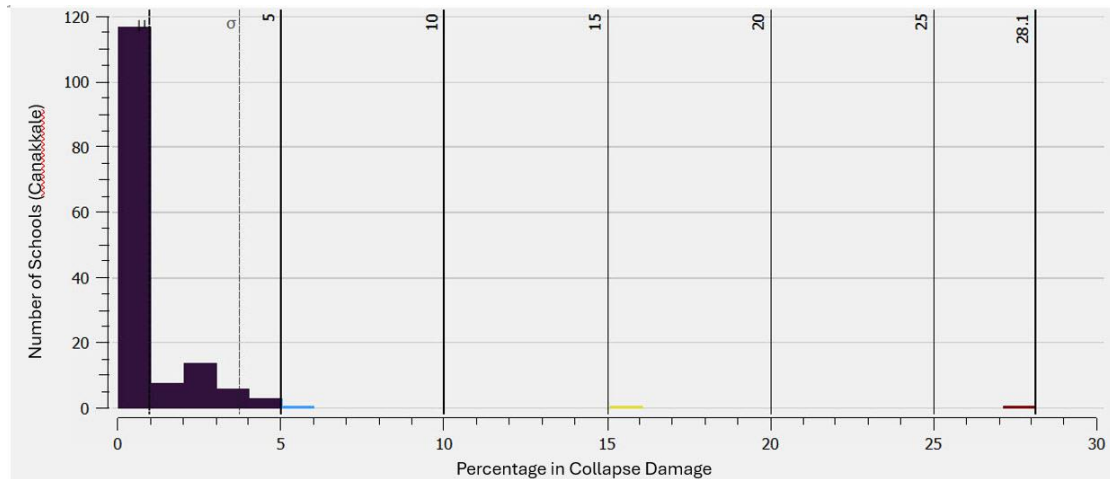


Figure 173. Çanakkale PSHA Results with 950 years return period _Collapse level distribution in School Buildings

In the deterministic approach, DSHA results have been used and the damage distribution has been analyzed in different damage levels throughout the province. The damage distribution in maps and charts are presented if Figures 174-177.

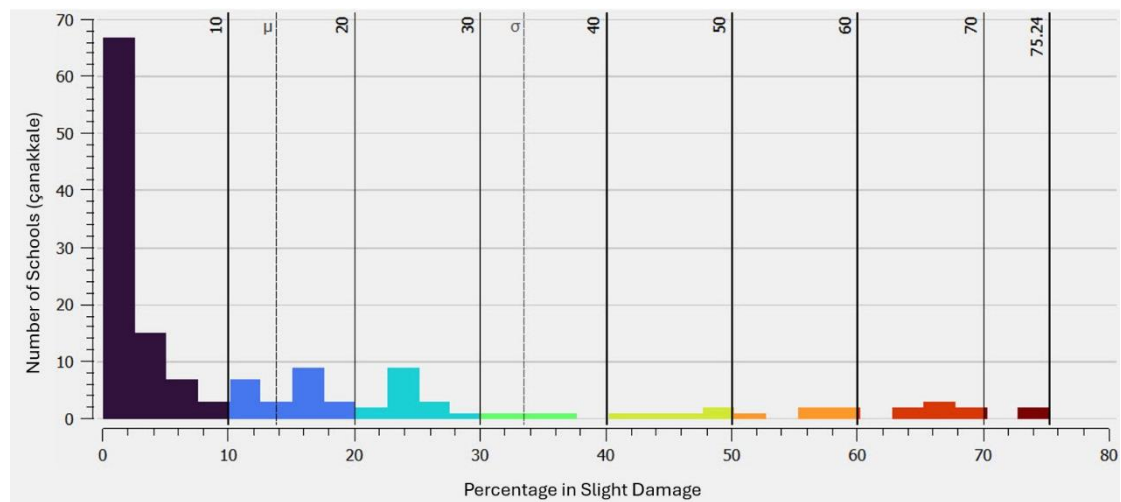
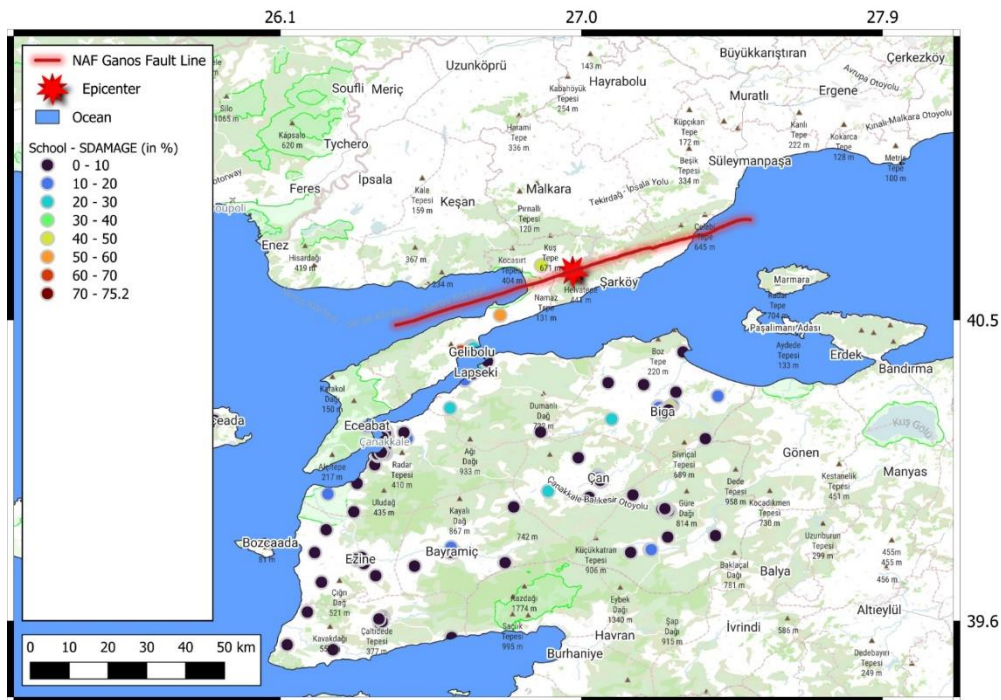


Figure 174. Canakkale Scenario Earthquake Slight Damage level distribution in School Buildings

The map highlights the geographical location of the North Anatolian Fault (NAF) near the Ganos Fault Line. The red star indicates the epicenter of the scenario earthquake. The histogram quantifies the distribution of schools by the percentage of slight damage they might sustain. The x-axis represents the percentage of slight damage, ranging from 0% to approximately 75%, while the y-axis indicates the number of schools corresponding to each damage percentage bracket.

Over than 70 percent of schools are expected to experience between 0% to 10% slight damage. A smaller number of schools fall within the higher damage

brackets, with very few schools about 10% of schools predicted to experience slight damage levels greater than 50%.

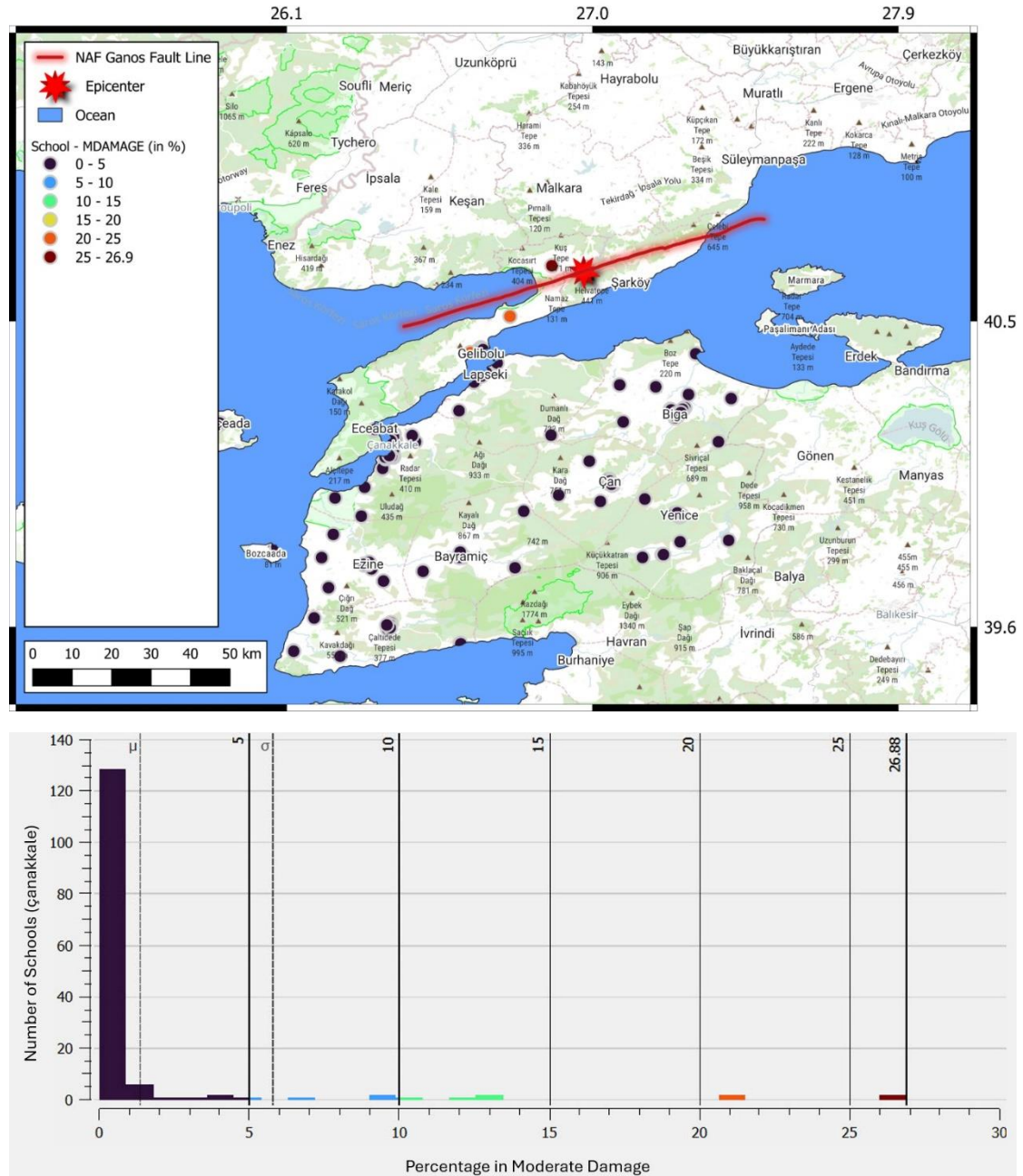


Figure 175. Canakkale Scenario Earthquake Moderate Damage level distribution in School Buildings

A significant majority of schools about 90% of the schools are expected to experience very low moderate damage, with percentages between 0% and 5%. Less than 5 percent of schools fall into the higher damage categories, and a few are expected to experience moderate damage above 10 percent.

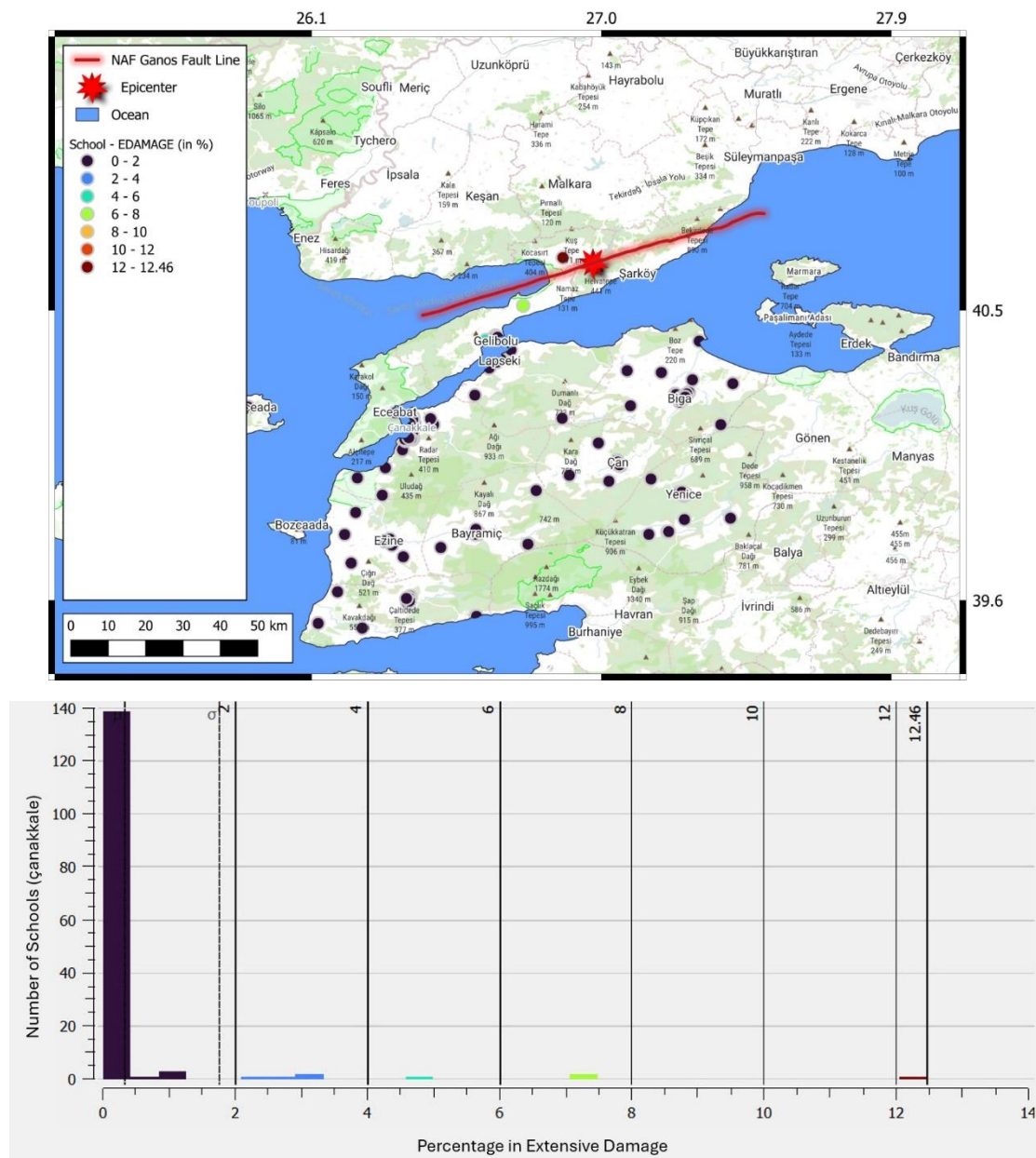


Figure 176. Canakkale Scenario Earthquake Extensive Damage level distribution in School Buildings

Fortunately, the vast majority of schools are likely to suffer little or no extensive damage. Most of the schools' damages are forecasted to be 0-2%. A few schools about 5 percent of schools, however, are expected to experience more intensive damage. Though few in number, these are the very same ones that sustain damage percentage variations of up to 12.46 percent, which is highly threatening to the lives of students and staff.

Earthquake Resilient Schools - EReS [BSB 966]
Project Nr: 101101206 (UCPM-2022-PP)
Deliverable D3.1: Joint assessment of seismic risk in the Greece- Türkiye CBA (school buildings in the pilot sites)

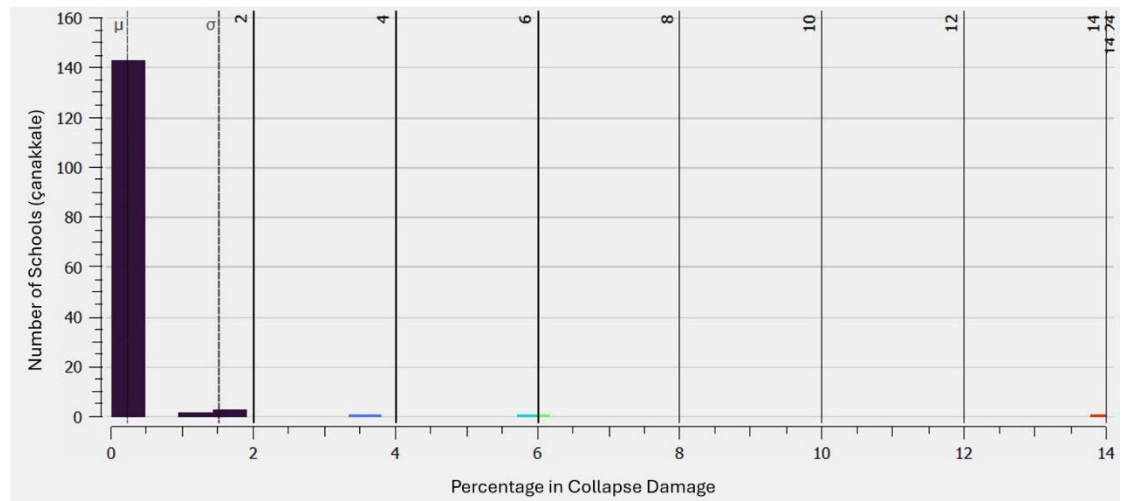
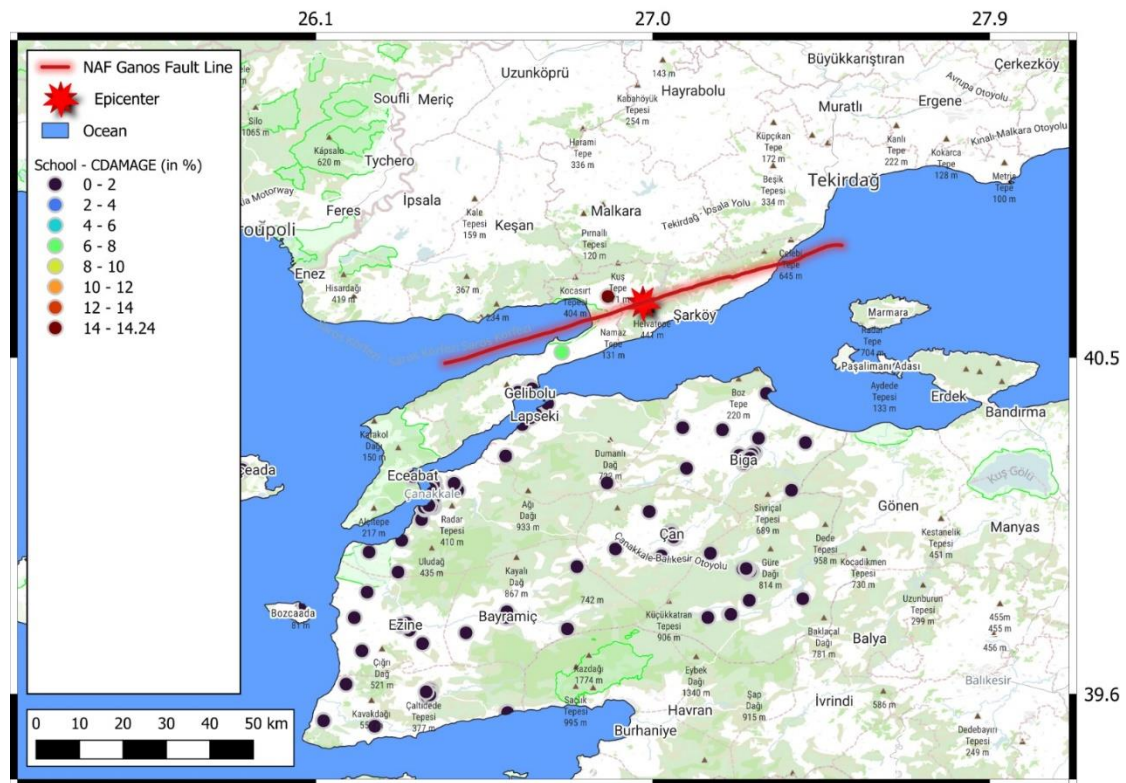


Figure 177. Canakkale Scenario Earthquake Collapse Damage level distribution in School Buildings

The tallest bar, clustered near the 0-2% range, indicates that the vast majority of schools (over 140) are expected to experience very minimal damage. A few schools fall into the 2-4% and 4-6% damage categories, with even fewer in higher damage ranges. One school is highlighted in red, indicating a significantly higher collapse damage percentage (14-14.24%).

4 NEAR REAL-TIME SEISMIC RISK ASSESSMENT

Having established a harmonized methodology that consistently delivers reliable seismic risk assessment results, as demonstrated in Section 3 through implementation in four pilot studies and comparisons with the M7.0 Samos Earthquake of October 30, 2020, which impacted both Samos and Izmir, the next step is to advance towards near real-time seismic risk assessment for school buildings.

The REDAS platform that was initially developed by our research team within the framework of the REDACT project, and is further elaborated within the present project, can be alerted when an earthquake occurs and retrieve the necessary data from existing strong-motion networks (of ITSAK, AFAD, etc.) in the Greece- Türkiye CBA. This network is on the progress to be enriched with the installation of next-generation low-cost accelerometers that are planned to be installed in selected school buildings in the 4 pilot study sites. The proposed locations for the Greek pilot sites in Alexandroupolis and Samos are presented in Figure 178 and Figure 179, respectively, while the proposed locations for Türkiye are depicted in Figure 180 for Izmir and Figure 181 for Çanakkale.



Figure 178. Location of school buildings in Alexandroupolis where next-generation low-cost accelerometers will be installed



Figure 179. Location of school buildings in Samos where next-generation low-cost accelerometers will be installed

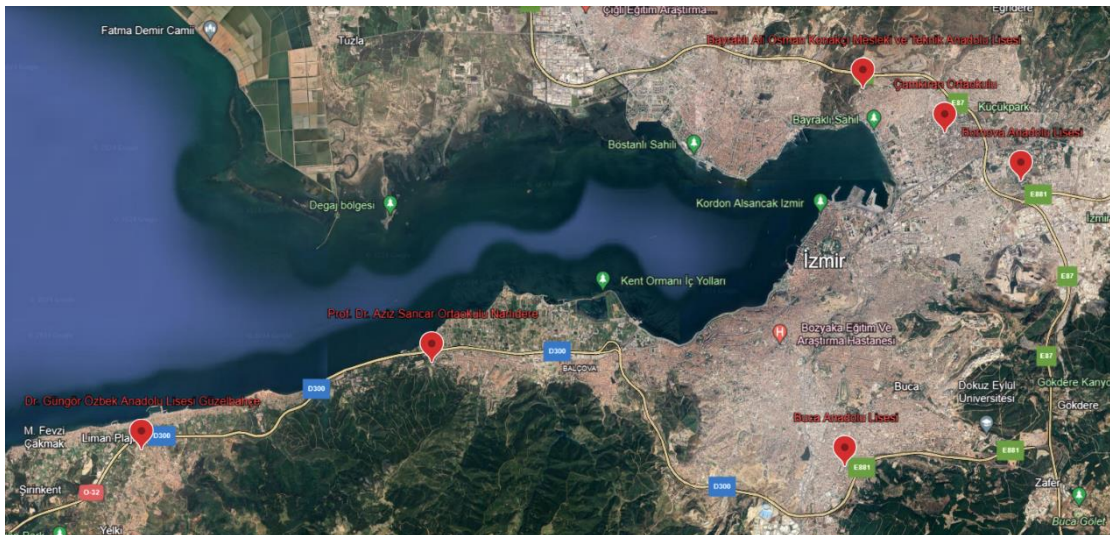


Figure 180. Geographical distribution of the pilot schools with different soil conditions in İzmir province.

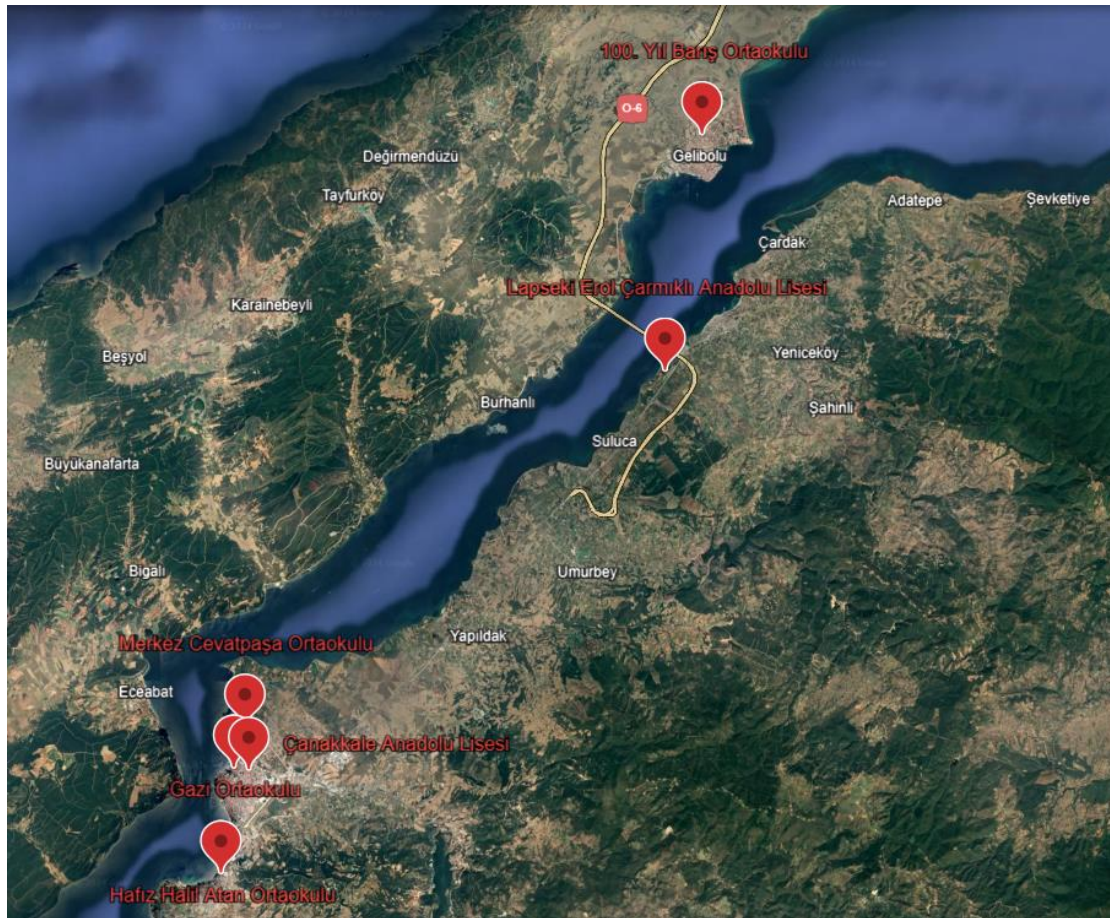


Figure 181. Geographical distribution of the pilot schools with different soil conditions in Çanakkale province.

Based on the ongoing work within the EReS project the REDAS platform:

- Was equipped with essential exposure data for the school building stock in the selected pilot sites, as provided by the current deliverable
- Includes a comprehensive set of fragility curves with the flexibility to switch to alternative sets, such as those by Martins & Silva (2021) or ESRM20.
- Will have the capability to estimate seismic motion in near real-time, using PGA and spectral acceleration values ($S_a(0.3s)$, $S_a(0.6s)$, and $S_a(1.0s)$).

As a result, the platform will be able to automatically generate near real-time seismic risk results comparable to those presented in Section 3. The output of this process will be a valuable tool for local authorities, aiding in seismic risk management and decision-making, particularly during the critical minutes immediately following an earthquake.

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ANNEX-A

A.1. Table of Schools in İzmir Province

	SCHOOL NAME	DISTRICT	LATITUDE	LONGITUDE	CONSTRUCTION YEAR	RELEVANT EQ CODE	# OF STORIES	BASEMENT	STRUCTURAL SYSTEM
1	80. yıl orhangazi Ortaokulu	Balçova	38.3837	27.0586	1963	1961	4	w/	Masonry
2	Yusuf Uz Ortaokulu	Balçova	38.3928	27.0486	1967	1961	4	w/	Reinforced Concrete
3	Ertuğrul Gazi Ortaokulu	Balçova	38.3942	27.0586	1976	1975	4	w/	Reinforced Concrete
4	Salih Dede Anadolu Lisesi	Balçova	38.389	27.048	1990	1975	3	w/	Reinforced Concrete
5	Sacide Ayaz Ortaokulu	Balçova	38.3624	27.0843	1991	1975	4	w/	Reinforced Concrete
6	Balçova Anadolu Lisesi	Balçova	38.3902	27.0550	1996	1975	3	w/o	Reinforced Concrete
7	Anadolu İnam Hatip Lisesi	Balçova	38.3896	27.0481	1997	1975	4	w/	Masonry
8	Balçova İmam Hatip Ortaokulu	Balçova	38.3895	27.0485	1998	1975	4	w/	Reinforced Concrete
9	Başöğretmen Atatürk Ortaokulu	Balçova	38.3907	27.0653	1999	1975	3	w/	Reinforced Concrete

10	Nevvar Salih İşgören Anadolu Lisesi	Balçova	38.3846	27.0322	2005	1998	3	w/	Reinforced Concrete
11	Asil Nadir Ortaokulu	Balçova	38.3914	27.0392	2005	1998	4	w/	Reinforced Concrete
12	Ahmet Hakkı Balcıoğlu Mesleki ve Teknik Anadolu Lisesi	Balçova	38.3876	27.0397	2008	2007	3	w/	Reinforced Concrete
13	Talatpaşa Ortaokulu	Bayraklı	38.4664	27.1666	1956	1953	2	w/o	Masonry
14	Bayraklı Anadolu Lisesi	Bayraklı	38.4666	27.1666	1966	1953	3	w/	Reinforced Concrete
15	Necip Fazıl Kısakürek Ortaokulu	Bayraklı	38.4749	27.1799	1982	1975	3	w/o	Masonry
16	Mehmet Akif Ersoy Anadolu Lisesi	Bayraklı	38.4643	27.1812	1985	1975	3	w/	Reinforced Concrete
17	Mustafa Uygur Ortaokulu	Bayraklı	38.4684	27.1783	1985	1975	3	w/o	Reinforced Concrete
18	Ticaret Borsası Ortaokulu	Bayraklı	38.4797	27.1728	1985	1975	3	w/	Reinforced Concrete
19	Mustafa Kemal Anadolu Lisesi	Bayraklı	38.4613	27.195	1988	1975	4	w/	Reinforced Concrete
20	Milli İrade Ortaokulu	Bayraklı	38.4827	27.1308	1989	1975	4	w/	Reinforced Concrete
21	Selahettin Eyyübi İmam Hatip Ortaokulu	Bayraklı	38.4827	27.1308	1989	1975	3	w/o	Reinforced Concrete
22	Nuri Atik Mesleki ve Teknik Lisesi	Bayraklı	38.478	27.1356	1991	1975	4	w/	Reinforced Concrete

23	Çamkiran Ortaokulu	Bayraklı	38.4631	27.1954	2023	2018	4	w/	Reinforced Concrete
24	Şehit Bersan Doğantekin Anadolu Lisesi	Bayraklı	38.4778	27.1346	1992	1975	4	w/	Reinforced Concrete
25	Nedret. İlhan Keten Ortaokulu	Bayraklı	38.4609	27.1931	1993	1975	4	w/	Reinforced Concrete
26	Piri Reis İmam Hatip Ortaokulu	Bayraklı	38.4696	27.1214	1993	1975	3	w/	Reinforced Concrete
27	Fatma Hikmet Kaşerci Ortaokulu	Bayraklı	38.4643	27.1812	1994	1975	4	w/	Reinforced Concrete
28	Zihni Üstün Ortaokulu	Bayraklı	38.4804	27.1159	1996	1975	4	w/o	Reinforced Concrete
29	Şehit Uğur Sarıkaya Ortaokulu	Bayraklı	38.4705	27.1347	1997	1975	3	w/	Reinforced Concrete
30	Mualla Muzaffer Yersel Ortaokulu	Bayraklı	38.4971	27.1558	1997	1975	1	w/o	Masonry
31	Kaymakam Özgür Azer Kurak Ortaokulu	Bayraklı	38.4549	27.1919	2001	1998	3	w/	Reinforced Concrete
32	Osman Çınar Ortaokulu	Bayraklı	38.4675	27.1844	2003	1975	3	w/	Reinforced Concrete
33	Gazeteci Çetin Altan Mesleki ve Teknik Anadolu Lisesi	Bayraklı	38.4734	27.1177	2004	1975	2	w/o	Masonry
34	Halide Edip Adivar Anadolu Lisesi	Bayraklı	38.4513	27.1844	2007	1998	4	w/	Reinforced Concrete

35	Halit Özpırlın Anadolu Lisesi	Bayraklı	38.4821	27.1287	2008	2007	4	w/	Reinforced Concrete
36	Ali Osman Konakçı Mesleki ve Teknik Anadolu Lisesi	Bayraklı	38.4758	27.1579	2011	2007	3	w/	Reinforced Concrete
37	Anadolu İnam Hatip Lisesi	Bayraklı	38.4701	27.1213	2012	2007	4	w/	Reinforced Concrete
38	Ertuğrul Gazi İmam Hatip Ortaokulu	Bayraklı	38.4676	27.1838	2015	2007	3	w/	Reinforced Concrete
39	Mustafa Çukur Ortaokulu	Bayraklı	38.4717	27.1866	2015	2007	4	w/	Reinforced Concrete
40	Cemil Atlas Ortaokulu	Bayraklı	38.4782	27.1347	1992	1975	4	w/o	Reinforced Concrete
41	Şehit Yüzbaşı Ali Rıza Sadak Ortaokulu	Bayraklı	38.4894	27.1415	2003	1998	4	w/o	Reinforced Concrete
42	Şehit Eren Bülbül Anadolu İmam Hatip Lisesi	Bayraklı	38.4777	27.1853	N/A	N/A	4	w/	Reinforced Concrete
43	Nuri Atik özel Eğitim Meslek Okulu	Bayraklı	38.4782	27.136	1990	1975	4	w/	Reinforced Concrete
44	Bornova Anadolu Lisesi	Bornova	38.4481	27.2192	2015	2007	3	w/	Reinforced Concrete
45	Yavuz Sultan Selim Ortaokulu	Bornova	38.4611	27.2154	1956	1953	2	w/o	Reinforced Concrete
46	Uzun Hasan Ortaokulu	Bornova	38.4393	27.1805	1963	1953	1	w/	Masonry
47	Suphi Koyuncuoğlu Anadolu Lisesi	Bornova	38.4619	27.2238	1969	1953	2	w/	Masonry

48	Aşık Veysel Görme Engelliler Ortaokulu	Bornova	38.4503	27.2219	1972	1961	3	w/	Masonry
49	Suphi Koyuncuoğlu Ortaokulu	Bornova	38.4622	27.2249	1973	1961	3	w/	Reinforced Concrete
50	Mediha Mahmut Bey Ortaokulu	Bornova	38.436	27.1889	1974	1961	3	w/	Reinforced Concrete
51	Doğanlar Hüsnu Bornovalı Ortaokulu	Bornova	38.4498	27.2528	1980	1975	2	w/	Masonry
52	Yahya Kemal Beyatlı Ortaokulu	Bornova	38.4586	27.2024	1985	1975	3	w/	Reinforced Concrete
53	Çimentaş Ortaokulu	Bornova	38.4135	27.1878	1985	1975	3	w/o	Reinforced Concrete
54	Hasan Tahsin Özel Eğitim Meslek Okulu	Bornova	38.4502	27.2227	1986	1975	1	w/o	Masonry
55	Şehit Mustafa Nerkis Ortaokulu	Bornova	38.4717	27.2108	1986	1975	4	w/	Reinforced Concrete
56	Mevlana Ortaokulu	Bornova	38.4795	27.216	1986	1975	3	w/	Reinforced Concrete
57	Naldöken Muharrem Candaş Ortaokulu	Bornova	38.4527	27.2696	1987	1975	2	w/o	Reinforced Concrete
58	Çimentaş Anadolu Lisesi	Bornova	38.4321	27.2051	1988	1975	4	w/	Reinforced Concrete
59	Mimar Sinan Mesleki ve Teknik Anadolu Lisesi	Bornova	38.4256	27.2069	1989	1975	4	w/	Reinforced Concrete
60	Çamdibi Kordon Birlik Ortaokulu	Bornova	38.4335	27.2005	1989	1975	3	w/o	Masonry

61	Hayrettin Duran Anadolu Lisesi	Bornova	38.4722	27.2093	1991	1975	4	w/o	Reinforced Concrete
62	Yunus Emre Anadolu Lisesi	Bornova	38.4711	27.2512	1992	1975	4	w/	Reinforced Concrete
63	Tülay Aktaş İştme Engelliler Ortaokulu	Bornova	38.45	27.2221	1992	1975	4	w/o	Reinforced Concrete
64	Bornova Mesleki ve Teknik Anadolu Lisesi	Bornova	38.4609	27.2176	1993	1975	4	w/o	Reinforced Concrete
65	Bornova Atatürk Mesleki ve Teknik Anadolu Lisesi	Bornova	38.4734	27.1993	1994	1975	4	w/	Masonry
66	Cem Bakioğlu Anadolu Lisesi	Bornova	38.4662	27.2468	1995	1975	4	w/	Reinforced Concrete
67	Altay Mesleki ve Teknik Anadolu Lisesi	Bornova	38.4493	27.2192	1996	1975	4	w/	Reinforced Concrete
68	Şükrü Seğer Ergil Çok Programlı Anadolu Lisesi	Bornova	38.4362	27.1997	1996	1975	4	w/	Reinforced Concrete
69	Süleyman Demirel Çok Programlı Anadolu Lisesi	Bornova	38.4824	27.2032	1997	1975	<u>3</u>	w/	Reinforced Concrete
70	Mazhar Zorlu Mesleki ve Teknik Anadolu Lisesi	Bornova	38.4499	27.2201	1998	1975	3	w/	Reinforced Concrete
71	Şehit Onbaşı Ali Güner Yeşilbağ Ortaokulu	Bornova	38.4916	27.2156	1998	1975	4	w/o	Reinforced Concrete

72	İsmet Sezgin Ortaokulu	Bornova	38.4745	27.1976	1999	1975	2	w/	Reinforced Concrete
73	Sait Güzelcan Ortaokulu	Bornova	38.4254	27.2323	2000	1998	4	w/	Reinforced Concrete
74	Şehit Musa Can Ortaokulu	Bornova	38.4458	27.2951	2001	1998	3	w/	Reinforced Concrete
75	Hatice Güzelcan Anadolu Lisesi	Bornova	38.425	27.2328	2002	1998	3	w/	Reinforced Concrete
76	Selçuk Yaşar Boyacılık Mesleki ve Teknik Anadolu Lisesi	Bornova	38.4459	27.223	2002	1998	2	w/	Reinforced Concrete
77	Şehitler Ortaokulu	Bornova	38.4254	27.2038	2004	1998	3	w/	Reinforced Concrete
78	Yaka Şengül Mustafa Karaca Ortaokulu	Bornova	38.5139	27.3188	2004	1998	3	w/o	Masonry
79	Gülsefa Kapancıoğlu Anadolu Lisesi	Bornova	38.3842	27.2125	2006	1998	2	w/	Masonry
80	Yunus Emre Ortaokulu	Bornova	38.4426	27.2313	2006	1998	3	w/	Reinforced Concrete
81	İzmir Esnaf ve Sanatkarlar Odaları Birliği Mesleki ve Teknik Anadolu Lisesi	Bornova	38.4058	27.1903	2006	1998	4	w/	Reinforced Concrete
82	Doğanlar Hacı Yaşar Kandur Ortaokulu	Bornova	38.4562	27.2403	2007	1998	3	w/	Reinforced Concrete
83	Reşat Turhan Ortaokulu	Bornova	38.429	27.2733	2010	2007	2	w/	Masonry

84	Şehit Polis Mehmet Çelik Ortaokulu	Bornova	38.4426	27.2043	2010	2007	3	w/	Reinforced Concrete
85	Şehit Erkan Er Ortaokulu	Bornova	38.4663	27.2529	2013	2007	3	w/	Reinforced Concrete
86	Bornova İzmir Fen Lisesi	Bornova	38.4546	27.2334	2014	2007	4	w/	Reinforced Concrete
87	Reşat Nuri Güntekin Ortaokulu	Bornova	38.4314	27.1914	2014	2007	4	w/	Reinforced Concrete
88	Evrenosoğlu Ortaokulu	Bornova	38.4249	27.1886	2015	2007	3	w/	Reinforced Concrete
89	Bornova İmam Hatip Ortaokulu	Bornova	38.4304	27.2082	2016	2007	4	w/	Reinforced Concrete
90	Mevlana Celaleddin Rumi İmam Hatip Ortaokulu	Bornova	38.4497	27.2238	2016	2007	3	w/	Reinforced Concrete
91	Şehit Polis Kağan Kılıç Anadolu İmam Hatip Lisesi	Bornova	38.4774	27.2208	2017	2007	3	w/	Reinforced Concrete
92	Aziz Erol Güzelcan Mesleki ve Teknik Anadolu Lisesi	Bornova	38.4303	27.2667	2018	2007	3	w/	Reinforced Concrete
93	Altındağ Anadolu Lisesi	Bornova	38.4196	27.1954	2019	2018	4	w/	Reinforced Concrete
94	Ferit Bahriye Ergil Ortaokulu	Bornova	38.4354	27.1994	2020	2018	4	w/o	Reinforced Concrete

95	Şehit Erol Olçok Anadolu İmam Hatip Lisesi	Bornova	38.4466	27.2232	2020	2007	4	w/	Reinforced Concrete
96	Fethiye Gönül Güzelcan Anadolu Lisesi	Bornova	38.4306	27.2666	2020	2018	3	w/	Reinforced Concrete
97	Seyit Şanlı Anadolu Lisesi	Bornova	38.4819	27.2036	2020	2018	4	w/	Reinforced Concrete
98	Ergene Ortaokulu	Bornova	38.4797	27.1975	2021	2018	5	w/	Reinforced Concrete
99	Hilal Necmiye Hüsnü Ataberk Ortaokulu	Bornova	38.465	27.217	N/A	N/A	3	w/	Reinforced Concrete
100	Güzelcan Kardeşler Ortaokulu	Bornova	38.4307	27.2671	2001	1998	3	w/	Reinforced Concrete
101	Şehit Yiğit Şahan Ortaokulu	Bornova	38.4474	27.3161	N/A	N/A	3	w/o	Masonry
102	100. Yıl Niyazi Ersoy Ortaokulu	Bornova	38.4427	27.2599	N/A	N/A	2	w/o	Reinforced Concrete
103	Şehit Bahattin Elden Anadolu İmam Hatip Lisesi	Aliağa	38.78661	26.95603	2021	2018	4	w/	Reinforced Concrete
104	Şehit Gökhan Çakır Anadolu Lisesi	Aliağa	38.78936	26.98669	2005	1998	4	w/	Reinforced Concrete
105	Habaş Hamdi Başaran Mesleki ve Teknik Anadolu Lisesi	Aliağa	38.79525	26.95872	2016	2007	4	w/	Reinforced Concrete
106	Şehit Oğuz Özgür Çevik Anadolu Lisesi	Aliağa	38.7969	26.96111	1979	1975	3	w/o	Reinforced Concrete

107	Aliğa Ortaokulu	Aliğa	38.80144	26.96711	1998	1975	4	w/o	Reinforced Concrete
108	Mesleki ve Teknik Anadolu Lisesi	Aliğa	38.78631	26.95994	2018	2007	4	w/	Reinforced Concrete
109	Alp Oğuz Anadolu Lisesi	Aliğa	38.79619	26.96461	2000	1998	4	w/o	Reinforced Concrete
110	Fatih Ortaokulu	Aliğa	38.79208	26.97778	2002	1998	3	w/o	Reinforced Concrete
111	Mustafa Güngör Çolakoğlu Anadolu Lisesi	Aliğa	38.89144	27.06124	2008	2007	2	w/	Reinforced Concrete
112	Gazi Ortaokulu	Aliğa	38.78275	26.95469	1987	1975	2	w/o	Reinforced Concrete
113	Şehit Murat Coşkun Ortaokulu	Aliğa	38.78969	26.96389	2018	2007	4	w/o	Reinforced Concrete
114	Şehit Bülent Kula Ortaokulu	Aliğa	38.78783	26.97811	2003	1998	3	w/	Reinforced Concrete
115	Şehit Sebahattin Karakaplan Ortaokulu	Aliğa	38.783	26.98506	2004	1998	2	w/	Reinforced Concrete
116	Helvacı Ortaokulu	Aliğa	38.69883	27.02647	1985	1975	3	w/o	Reinforced Concrete
117	Mehmet Saka Ortaokulu	Aliğa	38.80303	26.97906	1985	1975	3	w/	Reinforced Concrete
118	80. Yıl Çamlık Ortaokulu	Aliğa	38.80142	26.98503	N/A	N/A	3	w/o	Reinforced Concrete
119	Atatürk Ortaokulu	Aliğa	38.80214	26.975	2018	2007	3	w/	Reinforced Concrete

120	Şehit Kemal Ortaokulu	Aliğa	38.72658	26.98592	2002	1998	2	w/o	Reinforced Concrete
121	Petro-Kimya Ortaokulu	Aliğa	38.79367	26.96782	1998	1975	2	w/o	Reinforced Concrete
122	Heydar Aliyev Mesleki ve Teknik Anadolu Lisesi	Aliğa	38.79281	26.97683	2012	2007	3	w/	Reinforced Concrete
123	Yenişakran Yunus Emre Ortaokulu	Aliğa	38.88239	27.06754	2007	1998	2	w/	Reinforced Concrete
124	Şehit Ahmet Özsoy İmam Hatip Ortaokulu	Aliğa	38.81212	26.97968	2016	2007	4	w/o	Reinforced Concrete
125	TOBB Alosbi Mesleki ve Teknik Lisesi	Aliğa	38.81809	27.07059	2022	2018	4	w/	Reinforced Concrete
126	100. Yıl Ortaokulu	Aliğa	38.78653	26.97403	2023	2018	4	w/	Reinforced Concrete
127	Adalet Çok Programlı Anadolu Lisesi	Aliğa	38.87986	27.09539	2021	2018	1	w/o	Reinforced Concrete
128	Anadolu Lisesi	Bayındır	38.19067	27.73089	2011	2007	2	w/	Reinforced Concrete
129	Muzaffer Tuzcuoğlu Anadolu İmam Hatip Lisesi	Bayındır	38.21787	27.6469	1987	1975	4	w/o	Reinforced Concrete
130	Sadık Susamcıoğlu Anadolu Lisesi	Bayındır	38.21764	27.64531	2005	1998	3	w/o	Reinforced Concrete
131	Şehit Oktay Ardıç Mesleki ve Teknik Anadolu Lisesi	Bayındır	38.21912	27.64483	2012	2007	3	w/o	Reinforced Concrete

132	Mesleki ve Teknik Anadolu Lisesi	Bayındır	38.21817	27.64386	1994	1975	4	w/o	Reinforced Concrete
133	Kazım Dirik Ortaokulu	Bayındır	38.22133	27.64722	N/A	N/A	2	w/	Reinforced Concrete
134	Alparslan Mesleki ve Teknik Anadolu Lisesi	Bayındır	38.221	27.64608	1974	1961	2	w/	Reinforced Concrete
135	Merkez İsmet İnönü Ortaokulu	Bayındır	38.21636	27.64508	2000	1998	3	w/	Reinforced Concrete
136	Ulfet Onart Anadolu Lisesi	Bayındır	38.21779	27.64644	1977	1975	3	w/	Reinforced Concrete
137	Hacı İsmail Akdağ İmam Hatip Ortaokulu	Bayındır	38.21908	27.64506	1967	1961	1	w/o	Masonry
138	Fırınlı Ortaokulu	Bayındır	38.19456	27.60606	2000	1998	2	w/	Reinforced Concrete
139	Ergenli Şehit Cevdet Aygün Ortaokulu	Bayındır	38.24144	27.68858	2000	1998	3	w/o	Reinforced Concrete
140	Çırpı Mustafa Adanır Ortaokulu	Bayındır	38.17578	27.49503	2005	1998	2	w/	Reinforced Concrete
141	Canlı 60. Yıl Ortaokulu	Bayındır	38.19189	27.55453	1983	1975	2	w/	Reinforced Concrete
142	Zeytinova Şehit Erdal Canbulat Ortaokulu	Bayındır	38.20332	27.72933	2011	2007	4	w/	Reinforced Concrete
143	Çınardibi Orhan Kahraman Ortaokulu	Bayındır	38.29011	27.51824	1996	1975	2	w/	Masonry
144	80. Yıl Cumhuriyet Ortaokulu	Bergama	39.10397	27.15264	2003	1998	3	w/	Reinforced Concrete

145	Akif Ersezgin Anadolu Lisesi	Bergama	39.10008	27.14908	2017	2007	2	w/	Reinforced Concrete
146	Ayaskent İrfan Kırdar Ortaokulu	Bergama	39.183	27.33375	2003	1998	2	w/	Reinforced Concrete
147	70. Yıl Mesleki ve Teknik Anadolu Lisesi	Bergama	39.10936	27.16853	2015	2007	3	w/	Reinforced Concrete
148	13 Nisan Anadolu Lisesi	Bergama	39.11678	27.17686	2005	1998	2	w/o	Reinforced Concrete
149	Yusuf Kemalettin Perin Fen Lisesi	Bergama	39.10319	27.15553	2008	2007	3	w/	Reinforced Concrete
150	Göçbeyli Çok Programlı Anadolu Lisesi	Bergama	39.22306	27.39736	2002	1998	1	w/o	Masonry
151	Bölcek Ortaokulu	Bergama	39.17847	27.426	1986	1975	2	w/	Reinforced Concrete
152	Yusuf Kemalettin Perin Mesleki ve Teknik Anadolu Lisesi	Bergama	39.1112	27.17444	2012	2007	3	w/	Reinforced Concrete
153	Kozak Çok Programlı Anadolu Lisesi	Bergama	39.25222	27.09276	1998	1975	2	w/	Reinforced Concrete
154	Osman Nuri Ersezgin Ortaokulu	Bergama	39.10577	27.18724	2023	2018	3	w/o	Reinforced Concrete
155	Şehit Ümit özerli Ortaokulu	Bergama	39.10807	27.19578	2017	2007	2	w/	Reinforced Concrete
156	Yeniköy Ortaokulu	Bergama	39.00773	27.06307	1966	1961	3	w/o	Reinforced Concrete

157	Zeytindağ Çok Programlı Anadolu Lisesi	Bergama	38.97022	27.07192	1993	1975	2	w/	Reinforced Concrete
158	Yukarıbey Ortaokulu	Bergama	39.25236	27.0935	1979	1975	4	w/o	Reinforced Concrete
159	Sağancı Yunus Şahinkoç Ortaokulu	Bergama	39.09165	27.03418	1968	1961	2	w/	Reinforced Concrete
160	Şehit Ömer Yiğit Ulus Mesleki ve Teknik Anadolu Lisesi	Bergama	39.11106	27.17314	1961	1961	3	w/o	Reinforced Concrete
161	Bakırçay Mesleki ve Teknik Anadolu Lisesi	Bergama	39.10533	27.18642	2017	2007	3	w/	Reinforced Concrete
162	Gökçebeyli İmam Hatip Ortaokulu	Bergama	39.21935	27.40158	2001	1998	2	w/	Reinforced Concrete
163	Zubeyde Hanım Ortaokulu	Bergama	39.11734	27.17595	1993	1975	4	w/	Reinforced Concrete
164	Gazi Ortaokulu	Bergama	39.12075	27.18836	2022	2018	4	w/	Reinforced Concrete
165	14 Eylül Anadolu Lisesi	Bergama	39.09983	27.14803	1998	1975	4	w/	Reinforced Concrete
166	Şehit Üsteğmen Cemil Canan Çiçek İmam Hatip Ortaokulu	Bergama	39.11569	27.18439	1998	1975	1	w/o	Masonry
167	Aşağıcuma Ortaokulu	Bergama	39.26953	27.01253	1990	1975	1	w/o	Masonry
168	Dereköy EBSO Ortaokulu	Bergama	39.27435	27.32546	2012	2007	2	w/	Reinforced Concrete

169	100. Yıl Ortaokulu	Bergama	39.107	27.17367	2012	2007	3	w/	Reinforced Concrete
170	Çit Ahmetbeyler Ortaokulu	Bergama	39.17969	27.27656	1980	1975	1	w/o	Masonry
171	İsmaili Ortaokulu	Bergama	38.93284	27.2127	1997	1975	2	w/	Masonry
172	Cumhuriyet Anadolu Lisesi	Bergama	39.12075	27.1886	1973	1961	4	w/	Reinforced Concrete
173	Zeytindağ Yılmaz Ortaokulu	Bergama	38.96729	27.07052	1995	1975	3	w/	Reinforced Concrete
174	Aşağıbey Ortaokulu	Bergama	39.2498	26.9659	2000	1998	3	w/o	Reinforced Concrete
175	Anadolu İmam Hatip Lisesi	Bergama	39.09944	27.16081	2020	2018	4	w/	Reinforced Concrete
176	Ulubatlı Hasan İmam Hatip Ortaokulu	Bergama	39.10193	27.18869	2010	2007	2	w/	Reinforced Concrete
177	Tepeköy Ortaokulu	Bergama	39.09128	27.10809	1972	1961	1	w/o	Masonry
178	Mualla Ersezgin Ortaokulu	Bergama	39.09997	27.162	2014	2007	3	w/	Reinforced Concrete
179	Bergamalı Kadri Anadolu İmam Hatip Lisesi	Bergama	39.10081	27.17717	2016	2007	4	w/	Reinforced Concrete
180	Kız Anadolu İmam Hatip Lisesi	Bergama	39.09964	27.16061	2014	2007	4	w/	Reinforced Concrete
181	Göçbeyli Ortaokulu	Bergama	39.22311	27.4011	2006	1998	2	w/	Reinforced Concrete
182	80. Yıl Cumhuriyet Yatılı Bölge Ortaokulu	Bergama	39.10394	27.1533	N/A	N/A	3	w/	Reinforced Concrete

183	Güzel Sanatlar Lisesi	Bergama	39.1039	27.15351	1924	N/A	2	w/o	Masonry
184	Atatürk Ortaokulu	Beydağ	38.08869	28.20736	2005	1998	4	w/	Reinforced Concrete
185	Cumhuriyet Çok Programlı Anadolu Lisesi	Beydağ	38.08928	28.21861	2017	2007	4	w/	Reinforced Concrete
186	80. Yıl Aşağı Aktepe Ortaokulu	Beydağ	38.09458	28.22453	N/A	N/A	3	w/o	Reinforced Concrete
187	Şehit Üsteğmen Mehmet Sakallı Anadolu İmam Hatip Lisesi	Beydağ	38.08316	28.20862	2015	2007	2	w/	Reinforced Concrete
188	Sultan Alparslan Anadolu Lisesi	Buca	38.39481	27.19108	1993	1975	4	w/	Reinforced Concrete
189	85. Yıl Anadolu Lisesi	Buca	38.40125	27.15939	2011	2007	4	w/	Reinforced Concrete
190	Süleyman Şah Mesleki ve Teknik Anadolu Lisesi	Buca	38.39694	27.17353	1978	1975	4	w/	Reinforced Concrete
191	Mehmet Akif Ersoy Sosyal Bilimler Lisesi	Buca	38.38365	27.17695	2012	2007	3	w/o	Reinforced Concrete
192	Şerife Bacı Mesleki ve Teknik Anadolu Lisesi	Buca	38.35483	27.149	2011	2007	3	w/	Reinforced Concrete
193	Fatih Sultan Mehmet Anadolu Lisesi	Buca	38.40008	27.20394	2011	2007	3	w/	Reinforced Concrete
194	Ege İhracatçı Birlikleri Ortaokulu	Buca	38.37039	27.19044	1998	1975	3	w/	Reinforced Concrete

195	İsmet Yorgancılar Ortaokulu	Buca	38.3994	27.19503	2021	2018	4	w/	Reinforced Concrete
196	Aybers Hikmet Karabacak Anadolu Lisesi	Buca	38.36844	27.19411	2004	1998	3	w/	Reinforced Concrete
197	Zübeyde Hanım Mesleki ve Teknik Anadolu Lisesi	Buca	38.38764	27.18624	1988	1975	4	w/o	Reinforced Concrete
198	Makbule Süleyman Alkan Ortaokulu	Buca	38.38839	27.16747	2003	1998	4	w/	Reinforced Concrete
199	Mehmet Emin Yurdakul Ortaokulu	Buca	38.40006	27.15383	1994	1975	3	w/	Reinforced Concrete
200	Meşkure Şamlı Ortaokulu	Buca	38.39056	27.16856	1998	1975	3	w/	Reinforced Concrete
201	Müşerref Mahmut Tınas Ortaokulu	Buca	38.36878	27.19444	2002	1998	3	w/	Reinforced Concrete
202	Fatma Saygın Anadolu Lisesi	Buca	38.38297	27.17628	2004	1998	2	w/	Reinforced Concrete
203	Sezai Karakoç Anadolu İmam Hatip Lisesi	Buca	38.35927	27.14307	1994	1975	3	w/	Reinforced Concrete
204	Şehit Astsubay Halil Güçtekin Ortaokulu	Buca	38.38572	27.14536	2004	1998	3	w/o	Reinforced Concrete
205	Şirinyer Ertuğrul Gazi Anadolu Lisesi	Buca	38.36017	27.1505	1965	1961	4	w/o	Reinforced Concrete
206	İnci Özer Tırnaklı Fen Lisesi	Buca	38.38408	27.17608	2013	2007	3	w/	Reinforced Concrete

207	Gürçeşme Kanuni Sultan Süleyman Anadolu Lisesi	Buca	38.40289	27.14944	1967	1961	3	w/o	Reinforced Concrete
208	Yavuz Sultan Selim Ortaokulu	Buca	38.40143	27.16327	2000	1998	3	w/	Reinforced Concrete
209	30 Ağustos Ortaokulu	Buca	38.38822	27.15678	2012	2007	4	w/	Reinforced Concrete
210	Devlet Malzeme Ofisi Çok Programlı Anadolu Lisesi	Buca	38.39561	27.17417	2002	1998	4	w/	Reinforced Concrete
211	Şehit Hüseyin Şimşek Ortaokulu	Buca	38.38356	27.17594	1975	1961	4	w/	Reinforced Concrete
212	Kaynaklar Şehit Mesut Ardiç Ortaokulu	Buca	38.36569	27.27778	1999	1998	4	w/	Reinforced Concrete
213	Burhan Özfatura Ortaokulu	Buca	38.40278	27.19786	1991	1975	2	w/o	Reinforced Concrete
214	Şehit Mesut Taşar Ortaokulu	Buca	38.39046	27.18259	2009	2007	4	w/	Reinforced Concrete
215	Sevgi Ferit Akın Ortaokulu	Buca	38.37047	27.17825	N/A	N/A	3	w/	Reinforced Concrete
216	Şehit Üsteğmen Konuralp Özcan Ortaokulu	Buca	38.39211	27.19244	1999	1975	3	w/	Reinforced Concrete
217	İsmail Şekip Uyal Ortaokulu	Buca	38.35569	27.14646	1995	1975	3	w/	Reinforced Concrete
218	Saadet Emir Ortaokulu	Buca	38.39288	27.15829	2013	2007	4	w/	Reinforced Concrete

219	Ömer Seyfettin Mesleki ve Teknik Anadolu Lisesi	Buca	38.39725	27.18086	2007	1998	2	w/	Reinforced Concrete
220	Ötüken Ortaokulu	Buca	38.38755	27.1865	2022	2018	4	w/	Reinforced Concrete
221	Toki Turgut Özal Ortaokulu	Buca	38.39897	27.20558	2010	2007	2	w/	Reinforced Concrete
222	Gazi Ortaokulu	Buca	38.36597	27.14497	2012	2007	4	w/	Reinforced Concrete
223	Atatürk Ortaokulu	Buca	38.36911	27.14233	2021	2018	3	w/	Reinforced Concrete
224	Çakabey İmam Hatip Ortaokulu	Buca	38.38644	27.17408	2000	1998	2	w/	Reinforced Concrete
225	Necla Tevfik Karadavut Mesleki ve Teknik Anadolu Lisesi	Buca	38.35533	27.14047	2012	2007	2	w/	Reinforced Concrete
226	Kıbrıs Şehidi Yüzbaşı Cengiz Topel Ortaokulu	Buca	38.39947	27.14575	2000	1998	3	w/o	Reinforced Concrete
227	Anadolu Lisesi	Buca	38.35997	27.15017	1993	1975	4	w/	Reinforced Concrete
228	Mevlana Mesleki ve Teknik Anadolu Lisesi	Buca	38.38589	27.17458	N/A	N/A	N/A	N/A	Reinforced Concrete
229	Kozağaç Abdülhamit Han Ortaokulu	Buca	38.37671	27.17211	N/A	N/A	4	w/	Reinforced Concrete
230	Hasan Ali Yücel Ortaokulu	Buca	38.39047	27.15528	1976	1975	2	w/	Reinforced Concrete

231	Hüseyin Avni Ateşlioğlu Ortaokulu	Buca	38.35904	27.1442	2011	2007	4	w/	Reinforced Concrete
232	Işıl Saygın Güzel Sanatlar Lisesi	Buca	38.38242	27.1855	2004	1998	2	w/	Reinforced Concrete
233	Şehit Selim Topal Ortaokulu	Buca	38.37942	27.16639	2007	1998	4	w/	Reinforced Concrete
234	Atatürk Spor Lisesi	Buca	38.35983	27.24297	2005	1998	3	w/	Reinforced Concrete
235	Kız Anadolu İmam Hatip Lisesi	Buca	38.39581	27.15119	2019	2018	4	w/	Reinforced Concrete
236	Evliya Çelebi İmam Hatip Ortaokulu	Buca	38.36449	27.16124	2016	2007	4	w/	Reinforced Concrete
237	Mehmet Akif İnan Anadolu Lisesi	Buca	38.38431	27.17678	1868	N/A	2	w/	Masonry
238	Belenbaşı Şehit Sadık Şen Ortaokulu	Buca	38.30972	27.28217	2020	2018	3	w/	Reinforced Concrete
239	Tınaztepe Anadolu Lisesi	Buca	38.39765	27.20219	2021	2018	5	w/	Reinforced Concrete
240	Karaağaç Türk Kadınlar Konseyi Ortaokulu	Buca	38.28718	27.28009	1987	1975	1	w/o	Reinforced Concrete
241	Şehit Şener Kolay Anadolu İmam Hatip Lisesi	Çeşme	38.3619	26.30924	2016	2007	2	w/	Reinforced Concrete
242	Mesleki ve Teknik Anadolu Lisesi	Çeşme	38.35274	26.30684	1993	1975	3	w/	Reinforced Concrete
243	Hacı Murat Hatice Özsoy Anadolu Lisesi	Çeşme	38.31487	26.30171	2007	1998	3	w/	Reinforced Concrete

244	Atatürk Anadolu Lisesi	Çeşme	38.31381	26.40933	N/A	N/A	4	w/	Reinforced Concrete
245	Ulusoy Denizcilik Teknolojisi Mesleki ve Teknik Anadolu Lisesi	Çeşme	38.32569	26.31708	2007	1998	3	w/	Reinforced Concrete
246	Yahya Kerim Onart Mesleki ve Teknik Anadolu Lisesi	Çeşme	38.29774	26.7726	2007	1998	2	w/o	Reinforced Concrete
247	Mehmet Akpınar Ortaokulu	Çeşme	38.33039	26.30404	2001	1998	3	w/o	Reinforced Concrete
248	80. Yıl Çiftlik Ortaokulu	Çeşme	38.29239	26.28119	2007	1998	3	w/	Reinforced Concrete
249	15 Temmuz Şehitler Ortaokulu	Çeşme	38.31378	26.41044	2017	2007	4	w/	Reinforced Concrete
250	Ilıca Mustafa Bahçeli Ortaokulu	Çeşme	38.30789	26.35707	1989	1975	2	w/o	Reinforced Concrete
251	Çağdaş Yaşam Ovacık Ortaokulu	Çeşme	38.28965	26.31399	2004	1998	1	w/o	Masonry
252	Süleyman Sami Sarı Ortaokulu	Çeşme	38.36192	26.30914	1997	1975	3	w/o	Reinforced Concrete
253	Sıdıka Kelami Ertan Ortaokulu	Çeşme	38.32517	26.30912	1987	1975	3	w/	Reinforced Concrete
254	Yaşar Eğitim ve Kültür Vakfı Anadolu Lisesi	Çeşme	38.28903	26.37533	2004	1998	2	w/o	Reinforced Concrete
255	Sevgi Reha Aysay Mesleki ve Teknik Anadolu Lisesi	Çeşme	38.31412	26.32073	2012	2007	2	w/o	Reinforced Concrete

256	İmam Hatip Ortaokulu	Çeşme	38.32563	26.30942	2012	2007	1	w/o	Masonry
257	İsmail Gral Ortaokulu	Çeşme	38.29181	26.37806	2016	2007	2	w/	Reinforced Concrete
258	Bykiqli Anadolu Lisesi	Çiqli	38.49856	27.06525	1967	1961	3	w/o	Reinforced Concrete
259	Cahide Ahmet Dalyanoqlu Ortaokulu	Çiqli	38.50469	27.05931	1990	1975	4	w/	Reinforced Concrete
260	Şehit Samet Çakır Ortaokulu	Çiqli	38.49022	27.08069	1988	1975	2	w/	Reinforced Concrete
261	75. Yıl Mesleki ve teknik Anadolu Lisesi	Çiqli	38.48536	27.07267	1999	1975	4	w/	Reinforced Concrete
262	Borsa İstanbul Mesleki ve Teknik Anadolu Lisesi	Çiqli	38.51542	27.05636	2003	1998	4	w/	Reinforced Concrete
263	Rotary Mesleki ve Teknik Anadolu Lisesi	Çiqli	38.49233	27.05181	2004	1998	2	w/	Reinforced Concrete
264	Teđmen Ali Rıza Akıncı Anadolu Lisesi	Çiqli	38.4929	27.07748	2021	2018	4	w/	Reinforced Concrete
265	Tuđba zek Anadolu Lisesi	Çiqli	38.49931	27.08433	1995	1975	4	w/	Reinforced Concrete
266	Yıldız Tınas İzmirođlu Anadolu Lisesi	Çiqli	38.51619	27.04914	2004	1998	3	w/	Reinforced Concrete
267	Fen Lisesi	Çiqli	38.49483	26.94644	2001	1998	4	w/	Reinforced Concrete
268	Mehmet Hikmet Kaşerci Ortaokulu	Çiqli	38.486	27.07345	2022	2018	4	w/	Reinforced Concrete

269	Naime Tömek Mesleki ve Teknik Anadolu Lisesi	Çiğli	38.49628	27.08694	1998	1975	2	w/o	Reinforced Concrete
270	Necip Fasıl Kısakürek Anadolu Lisesi	Çiğli	38.4929	27.07748	2021	2018	4	w/	Reinforced Concrete
271	İzzet Gökçimen Ortaokulu	Çiğli	38.49886	27.06609	2010	2007	3	w/	Reinforced Concrete
272	Şenali Ocak Ortaokulu	Çiğli	38.5341	27.05115	1997	1975	2	w/	Reinforced Concrete
273	Güzeltepe Ortaokulu	Çiğli	38.49636	27.07213	2007	1998	3	w/	Reinforced Concrete
274	Tüpraş Mahmut Esat Bozkurt Ortaokulu	Çiğli	38.52111	27.04656	2001	1998	2	w/	Reinforced Concrete
275	Gülen Kora Ortaokulu	Çiğli	38.519	27.05694	2001	1998	3	w/	Reinforced Concrete
276	Ali Şir Nevai Ortaokulu	Çiğli	38.49617	27.08961	2000	1998	2	w/	Reinforced Concrete
277	Selim Diniz Ortaokulu	Çiğli	38.49692	27.05533	1989	1975	3	w/	Reinforced Concrete
278	Kemal Hadımlı Ortaokulu	Çiğli	38.50264	27.07689	2006	1998	3	w/o	Reinforced Concrete
279	Tekel Ortaokulu	Çiğli	38.52233	27.0325	1994	1975	1	w/o	Masonry
280	Kaklıç Ortaokulu	Çiğli	38.51083	26.98683	1996	1975	3	w/	Reinforced Concrete
281	Sasalı Ortaokulu	Çiğli	38.49518	26.94647	1990	1975	2	w/o	Reinforced Concrete

282	Mehpare Yağcı Anadolu İmam Hatip Lisesi	Çiğli	38.4915	27.05281	2014	2007	3	w/	Reinforced Concrete
283	Ahmet Adnun Saygun Mesleki ve Teknik Anadolu Lisesi	Çiğli	38.50747	27.06542	1990	1975	5	w/	Reinforced Concrete
284	Münevver Öğretmen Ortaokulu	Çiğli	38.51142	27.05064	1995	1975	3	w/o	Reinforced Concrete
285	Akiş Öğütçü Ortaokulu	Çiğli	38.50236	27.06263	2022	2018	4	w/	Reinforced Concrete
286	Şehit Astsubay Özgür Erdoğan İmam Hatip Ortaokulu	Çiğli	38.50814	27.06031	2016	2007	4	w/o	Reinforced Concrete
287	Atatürk Ortaokulu	Çiğli	38.508	27.06042	2016	2007	4	w/o	Reinforced Concrete
288	Şehit Ali Karaoğlan Anadolu Lisesi	Çiğli	38.491	27.0525	2012	2007	4	w/o	Reinforced Concrete
289	Sezai Karakoç Anadolu Lisesi	Çiğli	38.49366	27.0772	2023	2018	4	w/	Reinforced Concrete
290	Cumhuriyet Ortaokulu	Dikili	39.06258	26.88742	2002	1998	2	w/o	Reinforced Concrete
291	Çok Programlı Anadolu Lisesi	Dikili	39.07636	26.89114	1977	1975	3	w/	Reinforced Concrete
292	Semih Tınay Anadolu Lisesi	Dikili	39.06578	26.89431	2001	1998	3	w/	Reinforced Concrete

293	Çandarlı Nebiye Kavalalı Mesleki ve Teknik Anadolu Lisesi	Dikili	38.94089	26.93694	2001	1998	2	w/o	Reinforced Concrete
294	Deliktaş Şehit Cengiz Topel Ortaokulu	Dikili	38.98821	26.92672	1999	1975	1	w/	Masonry
295	Bademli Mehmet Ertuğrul Denizolgun Ortaokulu	Dikili	39.02664	26.82102	1975	1961	2	w/o	Masonry
296	Kabakum Ortaokulu	Dikili	39.12775	26.88888	1991	1975	1	w/o	Masonry
297	Çandarlı Mehmet Dilsiz Ortaokulu	Dikili	38.93703	26.93267	2004	1998	1	w/o	Reinforced Concrete
298	80 Yıl Salihler Ortaokulu	Dikili	39.17701	26.84954	2003	1998	2	w/	Reinforced Concrete
299	Can Rüştü Tüfekçioğlu Ortaokulu	Dikili	39.07722	26.89108	2005	1998	3	w/	Reinforced Concrete
300	Anadolu İmam Hatip Lisesi	Dikili	39.06215	26.88735	2015	2007	3	w/	Reinforced Concrete
301	Halim Foçalı Mesleki ve Teknik Anadolu Lisesi	Foça	38.68558	26.74078	1995	1975	3	w/	Reinforced Concrete
302	Reha Midilli Anadolu Lisesi	Foça	38.65792	26.75211	2005	1998	3	w/	Reinforced Concrete
303	Yenibağarası Şehit Yarbay Mesut Kuru Ortaokulu	Foça	38.66452	26.84292	N/A	N/A	3	w/	Reinforced Concrete
304	Yenifoça Reha Midilli Ortaokulu	Foça	38.74414	26.83073	1986	1975	3	w/	Reinforced Concrete

305	Bağarası Cemil Midilli İmam Hatip Ortaokulu	Foça	38.65928	26.84969	2011	2007	2	w/o	Reinforced Concrete
306	Necla Midilli Merkez Ortaokulu	Foça	38.66804	26.75363	1968	1961	1	w/	Masonry
307	Gerenköy Ortaokulu	Foça	38.65305	26.90165	1979	1975	3	w/	Reinforced Concrete
308	Reha Necla Midilli Ortaokulu	Foça	38.66339	26.74633	1994	1975	3	w/	Reinforced Concrete
309	Cemil Midilli Mesleki ve Teknik Anadolu Lisesi	Foça	38.65788	26.76268	2012	2007	3	w/	Reinforced Concrete
310	Recep Kerman Spor lisesi	Foça	38.74536	26.83061	1998	1975	2	w/o	Reinforced Concrete
311	Şehit Serhat Sıgnak Mesleki ve Teknik Anadolu Lisesi	Gaziemir	38.30603	27.13592	1998	1975	4	w/	Reinforced Concrete
312	Şehit Mustafa Yaman Anadolu İmam Hatip Lisesi	Gaziemir	38.321	27.12108	2016	2007	2	w/	Reinforced Concrete
313	Abdülhamit Han Çok Programlı Anadolu Lisesi	Gaziemir	38.29661	27.16378	2016	2007	3	w/	Reinforced Concrete
314	Nevvar Salih İşgören Anadolu Lisesi	Gaziemir	38.31192	27.13183	2007	1998	3	w/	Reinforced Concrete
315	Şehit Üsteğmen Murat Yıldız Çok Programlı Anadolu Lisesi	Gaziemir	38.33987	27.14368	1998	1975	4	w/	Reinforced Concrete

316	Borsa İstanbul Mesleki ve Teknik Anadolu Lisesi	Gazıemir	38.30881	27.14078	2003	1998	4	w/	Reinforced Concrete
317	Remzi Doğan Ortaokulu	Gazıemir	38.30214	27.17644	1998	1975	4	w/o	Reinforced Concrete
318	Şehit Uğur Palancı Ortaokulu	Gazıemir	38.32401	27.13099	2017	2007	3	w/o	Reinforced Concrete
319	Mevlüt Aysun Özer Ortaokulu	Gazıemir	38.33986	27.14277	1997	1975	3	w/	Reinforced Concrete
320	Şehit Furkan Yavaş Anadolu Lisesi	Gazıemir	38.3237	27.1388	1975	1961	3	w/o	Reinforced Concrete
321	Dokuz Eylül Ortaokulu	Gazıemir	38.32314	27.13844	1989	1975	4	w/	Reinforced Concrete
322	Atatürk Ortaokulu	Gazıemir	38.31269	27.13092	1995	1975	2	w/	Reinforced Concrete
323	Mustafa Kemal Paşa Ortaokulu	Gazıemir	38.35717	27.13281	1988	1975	2	w/	Reinforced Concrete
324	Sarıç Şehit Uzman Çavuş Egemen Yıldız Ortaokulu	Gazıemir	38.30463	27.15982	2009	2007	3	w/	Reinforced Concrete
325	Aslanlar Ortaokulu	Gazıemir	38.35186	27.13558	1992	1975	3	w/	Reinforced Concrete
326	Nevvar Salih İşören Ortaokulu	Gazıemir	38.31214	27.13152	2009	2007	3	w/	Reinforced Concrete
327	Dedeoğlu Ortaokulu	Gazıemir	38.29225	27.17428	1996	1975	2	w/	Reinforced Concrete

328	Gazi Umurbey Ortaokulu	Gazimir	38.32701	27.11874	2012	2007	4	w/	Reinforced Concrete
329	Kipa 10. Yıl Anadolu Lisesi	Gazimir	38.31361	27.12933	2004	1998	3	w/o	Reinforced Concrete
330	Mimar Kemalettin Anadolu Lisesi	Gazimir	38.30501	27.15961	2015	2007	4	w/	Reinforced Concrete
331	Şehit Dursun Acar Ortaokulu	Gazimir	38.30908	27.13472	2017	2007	2	w/	Reinforced Concrete
332	Gazimir İmam Hatip Ortaokulu	Gazimir	38.30625	27.137	1996	1975	3	w/	Reinforced Concrete
333	Şehit Er Selahattin Şener Anadolu İmam Hatip Lisesi	Gazimir	38.30911	27.13428	2017	2007	3	w/	Reinforced Concrete
334	İzmir Ticaret Odası Ortaokulu	Gazimir	38.33592	27.10483	2004	1998	2	w/	Reinforced Concrete
335	Öğretmen Ufuk Özdemir Ortaokulu	Gazimir	38.3266	27.13465	2019	2018	3	w/	Reinforced Concrete
336	Cengiz Topel Anadolu Lisesi	Güzelbahçe	38.36622	26.88381	1999	1998	4	w/	Reinforced Concrete
337	Vali Kazım Paşa Ortaokulu	Güzelbahçe	38.35921	26.88766	1997	1975	2	w/	Reinforced Concrete
338	60. Yıl Anadolu Lisesi	Güzelbahçe	38.37561	26.87891	1999	1975	3	w/	Reinforced Concrete
339	Borsa İstanbul Mesleki ve Teknik Anadolu Lisesi	Güzelbahçe	38.35303	26.88044	2003	1998	2	w/	Reinforced Concrete

340	Namık Elal Ortaokulu	Güzelbahçe	38.34108	26.87122	1973	1961	2	w/	Reinforced Concrete
341	Mustafa Saadet Alanyalıoğlu Ortaokulu	Güzelbahçe	38.31319	26.85983	2001	1998	2	w/	Reinforced Concrete
342	Ali Bayırlar Ortaokulu	Güzelbahçe	38.37674	26.88514	1995	1975	3	w/	Reinforced Concrete
343	Dr. Güngör Özbek Ortaokulu	Güzelbahçe	38.36486	26.87642	2016	2007	3	w/	Reinforced Concrete
344	Dr. Güngör Özbek Anadolu Lisesi	Güzelbahçe	38.36461	26.87708	2009	2007	4	w/	Reinforced Concrete
345	Şehit Abdullah Tayyip Olçok Anadolu İmam Hatip Lisesi	Güzelbahçe	38.34042	26.87014	2016	2007	5	w/	Reinforced Concrete
346	Bayraklı Hisar Anadolu İmam Hatip Lisesi	Karabağlar	38.47181	27.19058	2020	2018	2	w/	Reinforced Concrete
347	Atatürk Mesleki ve Teknik Anadolu Lisesi	Karabağlar	<u>38.36847</u>	27.12886	1981	1975	4	w/	Reinforced Concrete
348	Emirsultan Ortaokulu	Karabağlar	38.37911	27.10508	1997	1975	3	w/	Reinforced Concrete
349	İyiburnaz Ortaokulu	Karabağlar	38.37344	27.12121	1988	1975	2	w/o	Reinforced Concrete
350	İzmir Anadolu İmam Hatip Lisesi	Karabağlar	38.39525	27.09805	1994	1975	4	w/o	Reinforced Concrete
351	Cumhuriyet Mesleki ve Teknik Anadolu Lisesi	Karabağlar	38.39947	27.11294	1982	1975	5	w/o	Reinforced Concrete

352	Yeşilyurt Borsa İstanbul Çok Programlı Anadolu Lisesi	Karabağlar	38.38358	27.10692	2003	1998	4	w/	Reinforced Concrete
353	Nevvar Salih İşgören Anadolu Lisesi	Karabağlar	38.39049	27.09039	1996	1975	2	w/	Reinforced Concrete
354	Övgü Terzibaşoğlu Anadolu Lisesi	Karabağlar	38.39611	27.096	2008	2007	4	w/	Reinforced Concrete
355	29 Ekim Ortaokulu	Karabağlar	38.35847	27.12311	2015	2007	4	w/	Reinforced Concrete
356	Seniha Mayda Ortaokulu	Karabağlar	38.38519	27.12514	2007	1998	3	w/o	Reinforced Concrete
357	Şehit Erkan Özcan Anadolu Lisesi	Karabağlar	38.39517	27.10278	1998	1975	4	w/	Reinforced Concrete
358	Yavuz Selim Ortaokulu	Karabağlar	38.35258	27.08444	1967	1961	3	w/	Reinforced Concrete
359	Zeyni Hanım Ortaokulu	Karabağlar	38.37557	27.13255	2004	1998	3	w/	Reinforced Concrete
360	Şehit Komiser Abdullah Ortanca Ortaokulu	Karabağlar	38.36833	27.13277	2020	2018	5	w/o	Reinforced Concrete
361	İTO Vakfı Süleyman Taştekin Mesleki ve Teknik Anadolu Lisesi	Karabağlar	38.39942	27.11306	2002	1998	4	w/	Reinforced Concrete
362	Şehit Halit Taş Ortaokulu	Karabağlar	38.39601	27.10147	2012	2007	4	w/o	Reinforced Concrete
363	Fatih Sultan Mehmet Anadolu Lisesi	Karabağlar	38.351	27.08439	2011	2007	3	w/	Reinforced Concrete

364	Şehit Gazeteci Hasan Tahsin Ortaokulu	Karabağlar	38.39153	27.11058	1998	1975	3	w/	Reinforced Concrete
365	Fevzi Çakmak Ortaokulu	Karabağlar	38.40053	27.12491	1968	1961	3	w/	Reinforced Concrete
366	Şehit Egemen Öztürk Ortaokulu	Karabağlar	38.36098	27.09293	1999	1998	3	w/	Reinforced Concrete
367	Eşrefpaşa Anadolu Lisesi	Karabağlar	38.40026	27.11395	1988	1975	4	w/	Reinforced Concrete
368	Şerif Remzi Ortaokulu	Karabağlar	38.4006	27.11125	1992	1975	4	w/	Reinforced Concrete
369	Ülkü Ortaokulu	Karabağlar	38.3815	27.10569	1999	1998	2	w/	Reinforced Concrete
370	Katip Çelebi Ortaokulu	Karabağlar	38.39517	27.10267	1978	1975	4	w/o	Reinforced Concrete
371	Yunus Emre Ortaokulu	Karabağlar	38.37058	27.12921	2005	1998	3	w/o	Reinforced Concrete
372	Öğretmenler ve Şeker Mevhibe Ortaokulu	Karabağlar	38.38723	27.0773	1993	1975	4	w/o	Reinforced Concrete
373	Fevzi Özakat Anadolu Lisesi	Karabağlar	38.39181	27.08258	2016	2007	3	w/o	Reinforced Concrete
374	Şehit Ferdi Tosun Ortaokulu	Karabağlar	38.40194	27.11969	2007	1998	4	w/o	Reinforced Concrete
375	Eserkent Şehit İbrahim Okçu Ortaokulu	Karabağlar	38.37841	27.13029	1986	1975	3	w/o	Reinforced Concrete
376	İzmir Anadolu Lisesi	Karabağlar	38.36117	27.09862	1995	1975	4	w/	Reinforced Concrete

377	İnönü Anadolu Lisesi	Karabağlar	38.39463	27.06845	1974	1961	4	w/	Reinforced Concrete
378	Tahir Merzeci Ortaokulu	Karabağlar	38.37003	27.11125	N/A	N/A	4	w/o	Reinforced Concrete
379	Kazım Karabekir Ortaokulu	Karabağlar	38.39284	27.11837	1998	1975	3	w/	Reinforced Concrete
380	Nene Hatun Mesleki ve Teknik Anadolu Lisesi	Karabağlar	38.36041	27.09839	2014	2007	4	w/	Reinforced Concrete
381	Cumhuriyet Anadolu Lisesi	Karabağlar	38.37314	27.13286	1988	1975	4	w/	Reinforced Concrete
382	Akşemsettin İmam Hatip Ortaokulu	Karabağlar	38.39601	27.10147	2012	2007	2	w/o	Reinforced Concrete
383	Biruni Anadolu İmam Hatip Lisesi	Karabağlar	38.37258	27.13222	2014	2007	3	w/	Reinforced Concrete
384	Cemil Meriç Ortaokulu	Karabağlar	38.38056	27.11339	2012	2007	3	w/	Reinforced Concrete
385	Naci Şensoy Anadolu Lisesi	Karabağlar	38.37258	27.10769	2018	2007	4	w/	Reinforced Concrete
386	Cemil Midilli Ortaokulu	Karabağlar	38.39311	27.06997	2007	1998	3	w/	Reinforced Concrete
387	Bozyaka Mevlana İmam Hatip Ortaokulu	Karabağlar	38.38706	27.11289	2013	2007	4	w/	Reinforced Concrete
388	Vali Nevzat Ayaz Anadolu Lisesi	Karabağlar	38.39094	27.11628	2021	2018	3	w/	Reinforced Concrete
389	Yunus Emre Anadolu İmam Hatip Lisesi	Karabağlar	38.38367	27.11184	2005	1998	3	w/	Reinforced Concrete

390	İzmir Kız Anadolu İmam Hatip Lisesi	Karabağlar	38.39572	27.06578	2016	2007	4	w/	Reinforced Concrete
391	Necmettin Erbakan Anadolu İmam Hatip Lisesi	Karabağlar	38.37531	27.1198	2015	2007	5	w/	Reinforced Concrete
392	Şehit Muhtar Mete Sertbaş Ortaokulu	Karabağlar	38.383	27.11206	2015	2007	4	w/	Reinforced Concrete
393	Rakım Erkutlu Ortaokulu	Karabağlar	38.35956	27.08919	2016	2007	3	w/	Reinforced Concrete
394	Mehmet Akif Ersoy Ortaokulu	Karabağlar	38.35807	27.10185	2016	2007	4	w/	Reinforced Concrete
395	İlkkurşun Ortaokulu	Karabağlar	38.38106	27.12103	2016	2007	3	w/o	Reinforced Concrete
396	Mehmet Akif Ersoy İmam Hatip Ortaokulu	Karabağlar	38.36017	27.09917	2016	2007	4	w/	Reinforced Concrete
397	15 Temmuz Şehitleri Kız Anadolu İmam Hatip Lisesi	Karabağlar	38.39695	27.12972	2009	2007	5	w/	Reinforced Concrete
398	Şehit Yahya Efiloğlu İmam Hatip Ortaokulu	Karabağlar	38.40072	27.11393	2017	2007	4	w/	Reinforced Concrete
399	Bozyaka Şehit Fethi Bey Anadolu Lisesi	Karabağlar	38.38506	27.11531	1995	1975	4	w/	Reinforced Concrete
400	Uzundere Sabiha Yorgancılar Ortaokulu	Karabağlar	38.35182	27.09716	2000	1998	3	w/	Reinforced Concrete
401	Mordoğan Fatma Emin Karaağaç Çok Programlı Anadolu Lisesi	Karaburun	38.51698	26.61724	1987	1975	2	w/o	Reinforced Concrete

402	Atatürk Ortaokulu	Karaburun	38.518	26.61833	2011	2007	3	w/	Reinforced Concrete
403	Karaburun Ortaokulu	Karaburun	38.63867	26.51465	2013	2007	3	w/o	Reinforced Concrete
404	Anadolu İmam Hatip Lisesi	Karaburun	38.519	26.61992	2013	2007	2	w/	Reinforced Concrete
405	Çok Programlı Anadolu Lisesi	Karaburun	38.63894	26.51499	2002	1998	2	w/	Reinforced Concrete
406	Şehit Prof. Dr. İlhan Varank Anadolu İmam Hatip Lisesi	Karşıyaka	38.49032	27.1133	2015	2007	6	w/o	Reinforced Concrete
407	Atakent Anadolu Lisesi	Karşıyaka	38.47426	27.07251	1991	1975	3	w/	Reinforced Concrete
408	Behçet Uz Anadolu Lisesi	Karşıyaka	38.48216	27.09966	1989	1975	4	w/	Reinforced Concrete
409	Cihat Kora Anadolu Lisesi	Karşıyaka	38.46508	27.09556	2004	1998	3	w/	Reinforced Concrete
410	Karşıyaka Ortaokulu	Karşıyaka	38.45514	27.11589	1968	1961	4	w/	Reinforced Concrete
411	Suzan Divrik Mesleki ve Teknik Anadolu Lisesi	Karşıyaka	38.45589	27.11278	2009	2007	4	w/	Reinforced Concrete
412	Metin Aşıkoğlu Ortaokulu	Karşıyaka	38.45481	27.10488	2014	2007	3	w/	Reinforced Concrete
413	Murşide Altınçubuk Ortaokulu	Karşıyaka	38.48245	27.0963	1986	1975	3	w/o	Reinforced Concrete
414	Necip Demir Mesleki ve Teknik Anadolu Lisesi	Karşıyaka	38.46981	27.10111	2012	2007	4	w/	Reinforced Concrete

415	Şemikler Anadolu Lisesi	Karşiyaka	38.47165	27.0969	1966	1961	3	w/	Reinforced Concrete
416	Adnan Menderes Anadolu Lisesi	Karşiyaka	38.46889	27.10747	2018	2007	4	w/	Reinforced Concrete
417	Evin Leblebicioğlu Ortaokulu	Karşiyaka	38.46457	27.12568	1989	1975	3	w/	Reinforced Concrete
418	Ali Kaya Ortaokulu	Karşiyaka	38.49308	27.09664	2000	1998	3	w/	Reinforced Concrete
419	Atakent Erdoğan Kibarer Ortaokulu	Karşiyaka	38.46893	27.08463	1989	1975	2	w/	Reinforced Concrete
420	Hamdullah Suphi Tanrıöver Ortaokulu	Karşiyaka	38.46776	27.09089	2004	1998	2	w/	Reinforced Concrete
421	İmam Hatip Ortaokulu	Karşiyaka	38.4631	27.11944	2012	2007	2	w/	Reinforced Concrete
422	Selçuk Yaşar Alaybey Ortaokulu	Karşiyaka	38.46111	27.11181	1993	1975	4	w/	Reinforced Concrete
423	Eren Şahin Eronat Ortaokulu	Karşiyaka	38.48022	27.07728	2014	2007	3	w/	Reinforced Concrete
424	15 Temmuz şehitler Anadolu Lisesi	Karşiyaka	38.48231	27.08664	1989	1975	4	w/	Reinforced Concrete
425	Emlakbank Süleyman Demirel Anadolu Lisesi	Karşiyaka	38.4745	27.07344	1999	1998	4	w/	Reinforced Concrete
426	Şehit Mesut Uzlu Ortaokulu	Karşiyaka	38.47561	27.09875	1999	1998	3	w/	Reinforced Concrete
427	Cemil Akyüz Ortaokulu	Karşiyaka	38.46291	27.10711	2022	2018	4	w/	Reinforced Concrete

428	Fevzipaşa Ortaokulu	Karşiyaka	38.46592	27.11667	2008	2007	2	w/	Reinforced Concrete
429	Gazi Anadolu Lisesi	Karşiyaka	38.49022	27.10678	1976	1975	4	w/	Reinforced Concrete
430	Hasan Pınarcalı Ortaokulu	Karşiyaka	38.47054	27.09942	1998	1975	3	w/o	Reinforced Concrete
431	Emine Lahur Ortaokulu	Karşiyaka	38.47627	27.10648	2008	2007	3	w/o	Reinforced Concrete
432	Karşiyaka Lisesi	Karşiyaka	38.4647	27.12387	1978	1975	4	w/o	Reinforced Concrete
433	Zeki Şairoğlu Mesleki ve Teknik Anadolu Lisesi	Karşiyaka	38.47992	27.07867	2016	2007	3	w/	Reinforced Concrete
434	Şehit Polis Samet Kırçalı Ortaokulu	Karşiyaka	38.48909	27.09749	2014	2007	3	w/	Reinforced Concrete
435	Sakize Lahur Kız Anadolu İmam Hatip Lisesi	Karşiyaka	38.47617	27.10592	1988	1975	3	w/	Reinforced Concrete
436	Şehit Ahmet Oruç Ortaokulu	Karşiyaka	38.49281	27.11231	N/A	N/A	4	w/	Reinforced Concrete
437	Lamia Karer Ortaokulu	Karşiyaka	38.47897	27.08719	2016	2007	2	w/	Reinforced Concrete
438	Muhsin Yazıcıoğlu Anadolu İmam Hatip Lisesi	Karşiyaka	38.47614	27.10563	2016	2007	4	w/	Reinforced Concrete

439	Toki Karşiyaka Belediyesi Anadolu Lisesi	Karşiyaka	38.49519	27.10908	2011	2007	5	w/	Reinforced Concrete
440	Mehmet Ali Lahur Anadolu Lisesi	Karşiyaka	38.47533	27.10602	N/A	N/A	4	w/	Reinforced Concrete
441	Kazım Dirik Anadolu Lisesi	Karşiyaka	38.47175	27.10958	2018	2007	4	w/	Reinforced Concrete
442	Mustafa Kaya Spor Lisesi	Karşiyaka	38.49538	27.0962	2022	2018	4	w/	Reinforced Concrete
443	Bağyurdu Anadolu Lisesi	Kemalpaşa	38.41522	27.64056	1967	1961	2	w/	Masonry
444	Şehit Halil Kantarcı Anadolu İmam Hatip Lisesi	Kemalpaşa	38.43719	27.41442	2016	2007	4	w/	Reinforced Concrete
445	Ferzent Bulum Anadolu Lisesi	Kemalpaşa	38.43042	27.41342	2004	1998	2	w/	Reinforced Concrete
446	Lütfü Ürkmez Mesleki ve Teknik Anadolu Lisesi	Kemalpaşa	38.43328	27.41122	2010	2007	4	w/	Reinforced Concrete
447	Pakmaya Ülkü Hızal Anadolu Lisesi	Kemalpaşa	38.40434	27.44529	2004	1998	3	w/	Reinforced Concrete
448	Ulucak Anadolu Lisesi	Kemalpaşa	38.48588	27.36137	1992	1975	3	w/	Reinforced Concrete
449	Yamantürk Çok Programlı Anadolu Lisesi	Kemalpaşa	38.40942	27.53375	2004	1998	2	w/	Reinforced Concrete

450	Yiğitler Özcan Katrancı Ortaokulu	Kemalpaşa	38.41248	27.61449	1997	1975	3	w/	Reinforced Concrete
451	Yukarı Kızılca Ortaokulu	Kemalpaşa	38.38818	27.49524	N/A	N/A	3	w/o	Reinforced Concrete
452	15 Temmuz Demokrasi Şehitleri Ortaokulu	Kemalpaşa	38.42461	27.42858	2014	2007	4	w/	Reinforced Concrete
453	İbrahim Polat Ege Seramik Mesleki ve Teknik Anadolu Lisesi	Kemalpaşa	38.45164	27.46144	2010	2007	3	w/	Reinforced Concrete
454	Mopak Mesleki ve Teknik Anadolu Lisesi	Kemalpaşa	38.46061	27.35536	1997	1975	4	w/	Reinforced Concrete
455	Bağyurdu Kazım Dirik Ortaokulu	Kemalpaşa	38.4142	27.63164	2002	1998	2	w/	Reinforced Concrete
456	Ören Ortaokulu	Kemalpaşa	38.40792	27.58969	2005	1998	2	w/	Reinforced Concrete
457	Merkez Atatürk Ortaokulu	Kemalpaşa	38.42816	27.41863	1999	1998	4	w/	Reinforced Concrete
458	Bağyurdu Cumhuriyet Ortaokulu	Kemalpaşa	38.41582	27.63862	1997	1975	1	w/	Masonry
459	Aşağıkızılca Ortaokulu	Kemalpaşa	38.39767	27.51335	1969	1961	1	w/	Masonry
460	Ayşe hasan Türkmen Ortaokulu	Kemalpaşa	38.48383	27.35526	2003	1998	3	w/	Reinforced Concrete
461	İzmir Ümran Baradan Güzel Sanatlar Lisesi	Kemalpaşa	38.40394	27.44457	2009	2007	2	w/	Reinforced Concrete
462	Sekiz Eylül Ortaokulu	Kemalpaşa	38.42936	27.41261	2010	2007	3	w/	Reinforced Concrete

463	Merkez Cumhuriyet Ortaokulu	Kemalpaşa	38.42706	27.41603	1989	1975	4	w/o	Reinforced Concrete
464	örnekköy Şehit İncekara Ortaokulu	Kemalpaşa	38.41198	27.46817	2001	1998	3	w/o	Reinforced Concrete
465	80. Yıl Sütçüler Ortaokulu	Kemalpaşa	38.45983	27.45089	2018	2007	4	w/	Reinforced Concrete
466	Akalan Denen Ortaokulu	Kemalpaşa	38.46572	27.48125	1997	1975	2	w/	Reinforced Concrete
467	75. Yıl Ortaokulu	Kemalpaşa	38.42869	27.4305	1998	1975	3	w/	Reinforced Concrete
468	Çambel Şebnem Kardıçalı Ortaokulu	Kemalpaşa	38.46262	27.51896	2004	1998	3	w/	Reinforced Concrete
469	Aliya İzzetbegoviç Ortaokulu	Kemalpaşa	38.44041	27.66853	2015	2007	4	w/	Reinforced Concrete
470	Sinancılar Ortaokulu	Kemalpaşa	38.41777	27.66188	N/A	N/A	3	w/o	Reinforced Concrete
471	Sarılar Ortaokulu	Kemalpaşa	38.41543	27.65441	2003	1998	3	w/o	Reinforced Concrete
472	Armutlu Ortaokulu	Kemalpaşa	38.40739	27.53422	1982	1975	3	w/o	Reinforced Concrete
473	Dereköy Ortaokulu	Kemalpaşa	38.33801	27.45432	1982	1975	3	w/o	Reinforced Concrete
474	Kemalpaşa İmam Hatip Ortaokulu	Kemalpaşa	38.43353	27.41006	2012	2007	3	w/	Reinforced Concrete
475	Kızılızüm Şehit Ünal Sipahi Ortaokulu	Kemalpaşa	38.44065	27.36775	N/A	N/A	2	w/	Reinforced Concrete

476	80. Yıl Sütçüler İmam Hatip Ortaokulu	Kemalpaşa	38.45983	27.45089	2018	2007	4	w/	Reinforced Concrete
477	Toki Kemalpaşa Ortaokulu	Kemalpaşa	38.46028	27.50091	2022	2018	3	w/	Reinforced Concrete
478	Şehit Hakan Sağınç Anadolu Lisesi	Kınık	39.08786	27.36317	2012	2007	4	w/	Reinforced Concrete
479	Mesleki ve Teknik Anadolu Lisesi	Kınık	39.09167	27.39164	1970	1961	5	w/o	Reinforced Concrete
480	Yayakent Ortaokulu	Kınık	39.08792	27.30417	2010	2007	3	w/	Reinforced Concrete
481	Mert Öztüre Özel Eğitim Meslek Lisesi	Kınık	39.09	27.37489	1995	1975	4	w/	Reinforced Concrete
482	Gaziosmanpaşa Ortaokulu	Kınık	39.08671	27.3859	2001	1998	3	w/	Reinforced Concrete
483	Şehit Cafer Atilla Ortaokulu	Kınık	39.09103	27.37869	2021	2018	4	w/	Reinforced Concrete
484	Anadolu İmam Hatip Lisesi	Kınık	39.0879	27.37835	2021	2018	4	w/o	Reinforced Concrete
485	Mehmet Akif Ersoy Ortaokulu	Kınık	39.093	27.34742	N/A	N/A	3	w/o	Reinforced Concrete
486	Arpaseki Ortaokulu	Kınık	39.09659	27.49257	N/A	N/A	2	w/o	Reinforced Concrete
487	Şehit Ömer Halisdemir Ortaokulu	Kınık	39.09011	27.38981	2019	2018	3	w/o	Reinforced Concrete
488	Anadolu Lisesi	Kiraz	38.23217	28.20147	2008	2007	4	w/o	Reinforced Concrete

489	Çok Programlı Anadolu Lisesi	Kiraz	38.23231	28.20116	1996	1975	4	w/	Reinforced Concrete
490	Mesleki ve Teknik Anadolu Lisesi	Kiraz	38.23172	28.20165	2010	2007	2	w/	Reinforced Concrete
491	Türk Telekom Yatılı Bölge Ortaokulu	Kiraz	38.19878	28.20486	2009	2007	4	w/	Reinforced Concrete
492	Ali Niğde Anadolu İmam Hatip Lisesi	Kiraz	38.22629	28.20689	2015	2007	4	w/	Reinforced Concrete
493	Örencik Zeybekler Ortaokulu	Kiraz	38.14765	28.39201	2008	2007	3	w/o	Reinforced Concrete
494	Karaburç Cumhuriyet Ortaokulu	Kiraz	38.22241	28.27904	2002	1975	2	w/o	Reinforced Concrete
495	Kiraz Ortaokulu	Kiraz	38.23114	28.20219	1997	1975	4	w/	Reinforced Concrete
496	Hüseyin Sarı Ortaokulu	Kiraz	38.23171	28.21763	1991	1975	4	w/o	Reinforced Concrete
497	80. Yıl Suludere Ortaokulu	Kiraz	38.24916	28.2327	1967	1961	2	w/o	Masonry
498	Akpınar Ortaokulu	Kiraz	38.22907	28.39241	1967	1961	1	w/	Masonry
499	Ceritler Ortaokulu	Kiraz	38.2455	28.20352	2004	1998	2	w/	Reinforced Concrete
500	Haliller Ortaokulu	Kiraz	38.1856	28.28993	2014	2007	3	w/o	Reinforced Concrete
501	İğdeli Ortaokulu	Kiraz	38.21805	28.38064	1989	1975	2	w/o	Reinforced Concrete
502	Cevizli Ege Bölgesi Sanayi Odası Ortaokulu	Kiraz	38.23152	28.45695	N/A	N/A	2	w/o	Reinforced Concrete

503	Çayağazı Ortaokulu	Kiraz	38.21989	28.31708	2008	2007	3	w/	Reinforced Concrete
504	Umurlu Ortaokulu	Kiraz	38.12169	28.43575	2013	2007	3	w/	Reinforced Concrete
505	Doğancılar 15 Temmuz Şehitleri Ortaokulu	Kiraz	38.20466	28.45374	2018	2007	3	w/	Reinforced Concrete
506	50. Yıl Anadolu Lisesi	Konak	38.4195	27.15975	1993	1975	4	w/o	Reinforced Concrete
507	Atatürk Mesleki ve Teknik Anadolu Lisesi	Konak	38.42531	27.16267	1984	1975	3	w/	Reinforced Concrete
508	Mustafa Kemal Atatürk Mesleki ve Teknik Anadolu Lisesi	Konak	38.42003	27.15794	1991	1975	4	w/	Reinforced Concrete
509	Cumhuriyet Nevvar Salih İşgören Mesleki ve Teknik Anadolu Lisesi	Konak	38.43081	27.13797	2013	2007	3	w/	Reinforced Concrete
510	Çınarlı Mesleki ve Teknik Anadolu Lisesi	Konak	38.44036	27.17528	1983	1975	3	w/	Reinforced Concrete
511	Gazi Ortaokulu	Konak	38.43381	27.14103	1933	N/A	2	w/	Masonry
512	Gültepe Nenehatun Çok Programlı Anadolu Lisesi	Konak	38.41959	27.17847	1970	1961	3	w/	Reinforced Concrete
513	Şehit İdari Ataşe Çağlar Yücel Mesleki ve Teknik Anadolu Lisesi	Konak	38.42261	27.15469	1954	N/A	3	w/	Reinforced Concrete
514	İzmir Kız Lisesi	Konak	38.413	27.12233	1920	N/A	2	w/o	Masonry

515	İzmir Dış Ticaret Mesleki ve Teknik Anadolu Lisesi	Konak	38.42725	27.1352	1854	N/A	3	w/o	Reinforced Concrete
516	Karataş Anadolu Lisesi	Konak	38.41047	27.12069	1990	1975	4	w/o	Reinforced Concrete
517	Kestelli Şerife Eczacıbaşı Ortaokulu	Konak	38.41339	27.1318	1969	1961	4	w/o	Reinforced Concrete
518	Anadolu Lisesi	Konak	38.39731	27.13544	1993	1975	4	w/	Reinforced Concrete
519	Hürriyet Anadolu Lisesi	Konak	38.41803	27.13803	N/A	N/A	4	w/	Reinforced Concrete
520	Küçükyalı Mesleki ve Teknik Anadolu Lisesi	Konak	38.40325	27.10011	2004	1998	5	w/o	Reinforced Concrete
521	Namık Kemal Anadolu Lisesi	Konak	38.43168	27.14576	1887	N/A	2	w/o	Masonry
522	Nevvar Salih İşgören Eğitim Kampüsü Çok Programlı Anadolu Lisesi	Konak	38.43486	27.16027	2008	2007	3	w/	Reinforced Concrete
523	Alsancak Nevvar Salih İşgören Mesleki ve Teknik Anadolu Lisesi	Konak	38.43492	27.14786	1996	1975	2	w/	Reinforced Concrete
524	Nevvar Salih İşgören Eğitim Kampüsü-5 Mesleki ve Teknik Anadolu Lisesi	Konak	38.43583	27.16129	2007	1998	3	w/	Reinforced Concrete

525	Nevvar Salih İşgören Eğitim Kampüsü-3 Mesleki ve Teknik Anadolu Lisesi	Konak	38.43645	27.16196	2007	1998	3	w/	Reinforced Concrete
526	Ömer Lütfü Akad Ortaokulu	Konak	38.40489	27.13294	N/A	N/A	2	w/	Reinforced Concrete
527	Ömer Zeybek Mesleki ve Teknik Anadolu Lisesi	Konak	38.40763	27.17272	1997	1975	4	w/o	Reinforced Concrete
528	Selma Yiğitalp Anadolu Lisesi	Konak	38.39518	27.085	1985	1975	3	w/o	Reinforced Concrete
529	İbn-i Sina Mesleki ve Teknik Anadolu Lisesi	Konak	38.42449	27.16209	2012	2007	5	w/o	Reinforced Concrete
530	Misaki Milli Ortaokulu	Konak	38.40201	27.09695	1986	1975	2	w/	Reinforced Concrete
531	Kemal Atatürk Ortaokulu	Konak	38.41825	27.14042	1956	N/A	3	w/	Reinforced Concrete
532	Kazım Karabekir Ortaokulu	Konak	38.40808	27.17186	1976	1975	2	w/	Reinforced Concrete
533	Mersinli Ortaokulu	Konak	38.43681	27.17253	1960	N/A	2	w/o	Masonry
534	Mersinli Mesleki ve Teknik Anadolu lisesi	Konak	38.43725	27.17869	1981	1975	3	w/o	Reinforced Concrete
535	Boğaziçi Ortaokulu	Konak	38.41936	27.17833	1967	1961	3	w/o	Reinforced Concrete
536	9 Eylül Ortaokulu	Konak	38.40646	27.11218	2024	2018	3	w/o	Reinforced Concrete

537	Osman Kibar Ortaokulu	Konak	38.40692	27.12559	1989	1975	4	w/o	Reinforced Concrete
538	Gürçeşme Leman Alptekin Ortaokulu	Konak	38.406	27.15086	1967	1961	2	w/	Reinforced Concrete
539	Beştepeler Çok programlı Anadolu Lisesi	Konak	38.40558	27.13675	1967	1961	2	w/	Reinforced Concrete
540	Mimar Sinan Ortaokulu	Konak	38.41672	27.16161	1997	1975	2	w/o	Reinforced Concrete
541	Barbaros Hayrettin İmam Hatip Ortaokulu	Konak	38.41958	27.16817	2021	2018	4	w/	Reinforced Concrete
542	Vali Vecdi Gönül Anadolu Lisesi	Konak	38.40286	27.1029	1990	1975	6	w/	Reinforced Concrete
543	Göztepe Mesleki ve Teknik Anadolu Lisesi	Konak	38.39748	27.09332	2007	1998	3	w/	Reinforced Concrete
544	Dokuz Eylül Anadolu Lisesi	Konak	38.41089	27.18254	1988	1975	4	w/	Reinforced Concrete
545	19 Mayıs Ortaokulu	Konak	38.40725	27.14327	2022	2018	4	w/	Reinforced Concrete
546	Necatibey Ortaokulu	Konak	38.40317	27.10669	1987	1975	3	w/	Reinforced Concrete
547	Atatürk Lisesi	Konak	38.42929	27.14035	1888	N/A	3	w/	Masonry
548	Hacışakir Eczacıbaşı Ortaokulu	Konak	38.40999	27.12125	1995	1975	2	w/	Reinforced Concrete
549	Güzelyalı Ortaokulu	Konak	38.39519	27.07886	1990	1975	3	w/	Reinforced Concrete

550	Kıbrıs Şehitleri Ortaokulu	Konak	38.41302	27.18115	1978	1975	2	w/	Reinforced Concrete
551	Ali Fuat Cebesoy Ortaokulu	Konak	38.40482	27.16242	1973	1961	2	w/	Reinforced Concrete
552	Kahramanlar Mustafa Öğütveren Ortaokulu	Konak	38.42667	27.15119	1955	N/A	2	w/	Masonry
553	İbni Sina Ortaokulu	Konak	38.41958	27.14922	N/A	N/A	2	w/	Reinforced Concrete
554	Nevvar Salih İşgören Eğitim Kampüsü-2 Mesleki ve Teknik Anadolu Lisesi	Konak	38.43645	27.16196	2007	1998	3	w/	Reinforced Concrete
555	Mustafa Rahmi Balaban Ortaokulu	Konak	38.41671	27.18136	2010	2007	2	w/	Reinforced Concrete
556	Nevvar Salih İşgören Eğitim Kampüsü-4 Mesleki ve Teknik Anadolu Lisesi	Konak	38.43561	27.16119	2007	1998	3	w/	Reinforced Concrete
557	Mithatpaşa Mesleki ve Teknik Anadolu Lisesi	Konak	38.40706	27.10731	1881	N/A	2	w/	Masonry
558	Seyfi Gülmezoğlu Ortaokulu	Konak	38.40888	27.18521	1993	1975	3	w/o	Reinforced Concrete
559	Zafer Ortaokulu	Konak	38.40905	27.13247	N/A	N/A	2	w/o	Masonry
560	Barbaros Hayrettin Ortaokulu	Konak	38.42017	27.16807	1986	1975	2	w/o	Reinforced Concrete
561	Saliha Hüseyin Özyavuz Ortaokulu	Konak	38.39739	27.135	1995	1975	4	w/	Reinforced Concrete

562	Rıdvan Nafiz Edgüder Ortaokulu	Konak	38.40767	27.15961	1989	1975	3	w/	Reinforced Concrete
563	26 Ağustos Ortaokulu	Konak	38.41482	27.15516	1955	N/A	3	w/	Reinforced Concrete
564	Dumlupınar Ortaokulu	Konak	38.40632	27.13703	2021	2018	4	w/	Reinforced Concrete
565	Şehit Fethibey Ortaokulu	Konak	38.42023	27.14439	1961	N/A	2	w/	Reinforced Concrete
566	Şehit Ömer Halisdemir Kız Anadolu İmam Hatip Lisesi	Konak	38.39764	27.07764	2012	2007	6	w/	Reinforced Concrete
567	ŞehitFazılbey Ortaokulu	Konak	38.42417	27.15802	1963	1961	3	w/	Reinforced Concrete
568	İnkılap Ortaokulu	Konak	38.41244	27.13873	1966	1961	2	w/	Reinforced Concrete
569	Şehit Halit Zilani Çelik İmam Ortaokulu	Konak	38.4165	27.17056	2016	2007	3	w/	Reinforced Concrete
570	Şehit Astsubay Bülent Aydın İmam Hatip Ortaokulu	Konak	38.42427	27.158	1963	1961	3	w/	Reinforced Concrete
571	Fatih Mehmet İmam Ortaokulu	Konak	38.40989	27.13856	1977	1975	2	w/	Reinforced Concrete
572	Kazım Karabekir İmam Hatip Ortaokulu	Konak	38.40821	27.17212	1966	1961	2	w/o	Masonry
573	Ziya Gökalp İmam Hatip Ortaokulu	Konak	38.4223	27.16358	N/A	N/A	3	w/	Reinforced Concrete

574	Yıldırım Kemal Bey İmam Hatip Ortaokulu	Konak	38.42019	27.14894	2018	2007	2	w/	Reinforced Concrete
575	Hacışakir Eczacıbaşı İmam Hatip Ortaokulu	Konak	38.40997	27.12125	1995	1975	2	w/o	Reinforced Concrete
576	Anadolu İmam Hatip Lisesi	Konak	38.41983	27.15975	1993	1975	4	w/	Reinforced Concrete
577	Görece şehit Mustafa Mutlu Ortaokulu	Menderes	38.27781	27.12447	2004	1998	2	w/	Masonry
578	Fatma Ramazan Büküşoğlu Anadolu Lisesi	Menderes	38.26322	27.12844	2009	2007	3	w/	Reinforced Concrete
579	Gümüldür Öğretmen Emine Yazlalı Ortaokulu	Menderes	38.07889	27.018	2012	2007	3	w/	Reinforced Concrete
580	Özdere Ortaköy Ortaokulu	Menderes	38.05072	27.05469	2007	1998	2	w/	Reinforced Concrete
581	Özdere T. Çamur Mesleki ve Teknik Anadolu Lisesi	Menderes	38.07883	27.01792	1994	1975	4	w/	Reinforced Concrete
582	Çamönü Naile Karadeniz Ortaokulu	Menderes	38.1043	27.1538	1994	1975	2	w/	Reinforced Concrete
583	Yeniköy Ortaokulu	Menderes	38.21536	27.04369	2007	1998	3	w/	Reinforced Concrete
584	Gümüldür Bilgin Bülent Kılıç Anadolu Lisesi	Menderes	38.07147	27.00025	2005	1998	3	w/	Reinforced Concrete
585	Tekeli Şehit Er İbrahim Kocagöbek Ortaokulu	Menderes	38.18683	27.19247	1992	1975	3	w/o	Reinforced Concrete
586	Oğlananası Ortaokulu	Menderes	38.23894	27.22553	N/A	N/A	1	w/	Masonry

587	Değirmendere Ortaokulu	Menderes	38.1171	27.14239	1985	1975	2	w/	Reinforced Concrete
588	Özdere Oğan Timinci Ortaokulu	Menderes	38.02136	27.0976	1992	1975	3	w/o	Reinforced Concrete
589	Dereköy Mualla Nusret Sezel Ortaokulu	Menderes	38.24681	27.11599	2006	1998	3	w/o	Reinforced Concrete
590	Şehit Hakan İncekar Ortaokulu	Menderes	38.25431	27.13439	2005	1998	3	w/	Reinforced Concrete
591	Küner Köyü Şehit Binbaşı Ercan Ortaokulu	Menderes	38.21382	27.12296	1997	1975	1	w/	Masonry
592	Şehit Hasan Özkapu Ortaokulu	Menderes	38.01611	27.12832	1997	1975	4	w/	Reinforced Concrete
593	Gölcükler Adnan Olcay Ortaokulu	Menderes	38.25839	27.14351	1999	1975	1	w/	Masonry
594	Karakuyu Ortaokulu	Menderes	38.13361	27.23469	2006	1998	2	w/	Reinforced Concrete
595	Çileme Ortaokulu	Menderes	38.14963	27.17791	2005	1998	2	w/	Reinforced Concrete
596	Ataköy Ortaokulu	Menderes	38.09053	27.16703	1989	1975	2	w/	Reinforced Concrete
597	Develi Ortaokulu	Menderes	38.20278	27.16778	2018	2007	3	w/	Reinforced Concrete
598	Görece Mustafa Kemal Ortaokulu	Menderes	38.29021	27.12585	1994	1975	4	w/	Reinforced Concrete
599	Süleyman Çevik Ortaokulu	Menderes	38.25106	27.12867	2015	2007	4	w/	Reinforced Concrete

600	Menderes Şehit Mehmet Kıvık Anadolu Lisesi	Menderes	38.2585	27.13042	2004	1998	3	w/	Reinforced Concrete
601	Şehit Kaymakam Muhammet Fatih Safitürk Anadolu İmam Hatip Lisesi	Menderes	38.25694	27.14633	2015	2007	4	w/	Reinforced Concrete
602	Menderes Belediyesi Çok Programlı Anadolu Lisesi	Menderes	38.24856	27.13928	2012	2007	5	w/	Reinforced Concrete
603	Altıntepe Ortaokulu	Menderes	38.23502	27.15178	2004	1998	2	w/	Reinforced Concrete
604	Bulgurca Ortaokulu	Menderes	38.21481	27.23164	1997	1975	2	w/	Reinforced Concrete
605	Şehit Doğan Sakarya Ortaokulu	Menderes	38.26736	27.14572	2021	2018	3	w/	Reinforced Concrete
606	Şehit Gökhan Bayraktar Anadolu Lisesi	Menderes	38.28619	27.12729	2015	2007	3	w/	Reinforced Concrete
607	80. Yıl Asarlık Ortaokulu	Menemen	38.58417	27.09295	1997	1975	3	w/o	Reinforced Concrete
608	Emiralem Atatürk Ortaokulu	Menemen	38.61975	27.15222	1992	1975	3	w/o	Reinforced Concrete
609	Halide Gencer Mesleki ve Teknik Anadolu Lisesi	Menemen	38.60931	27.09328	1993	1975	4	w/	Reinforced Concrete
610	İrfan Erdem Ortaokulu	Menemen	38.61133	27.06511	2004	1998	3	w/	Reinforced Concrete

611	Erdinç Ahmet Cengiz Mesleki ve Teknik Lisesi	Menemen	38.60661	27.08053	1976	1975	4	w/	Reinforced Concrete
612	Anadolu İmam Hatip Lisesi	Menemen	38.54897	27.05417	2011	2007	4	w/	Reinforced Concrete
613	Anadolu Lisesi	Menemen	38.60792	27.0932	1994	1975	3	w/	Reinforced Concrete
614	Mesleki ve Teknik Anadolu Lisesi	Menemen	38.60396	27.07571	1979	1975	3	w/o	Reinforced Concrete
615	Atatürk Anadolu Lisesi	Menemen	38.60792	27.09324	2001	1998	4	w/o	Reinforced Concrete
616	Seyrek Villakent Anadolu Lisesi	Menemen	38.603	26.93636	2009	2007	4	w/	Reinforced Concrete
617	Cumhuriyet Ortaokulu	Menemen	38.60053	27.07997	1977	1975	2	w/	Reinforced Concrete
618	Haykıran Adem Saatçi Ortaokulu	Menemen	38.63889	27.11128	1988	1975	3	w/	Reinforced Concrete
619	Seyrek Ortaokulu	Menemen	38.58051	26.97479	1964	1961	2	w/o	Reinforced Concrete
620	Şehit Kemal Ortaokulu	Menemen	38.60472	27.07425	1991	1975	3	w/o	Reinforced Concrete
621	Ulukent Ortaokulu	Menemen	38.53806	27.03989	2015	2007	4	w/	Reinforced Concrete
622	Koyundere Ortaokulu	Menemen	38.57675	27.0645	1994	1975	2	w/	Reinforced Concrete
623	100 Yıl Ortaokulu	Menemen	38.5887	27.08065	2002	1998	3	w/o	Reinforced Concrete

624	Erol Tarakçıoğlu Ortaokulu	Menemen	38.58056	27.07292	2006	1998	2	w/	Reinforced Concrete
625	Asarlık TOKİ Ortaokulu	Menemen	38.58208	27.09002	2006	1998	4	w/	Reinforced Concrete
626	Egekent-2 Ortaokulu	Menemen	38.55562	27.0446	2005	1998	3	w/	Reinforced Concrete
627	Şehit Er Serdar Amak Ortaokulu	Menemen	38.58358	27.07839	1997	1975	4	w/	Reinforced Concrete
628	Atatürk Ortaokulu	Menemen	38.60286	27.07008	2010	2007	3	w/o	Reinforced Concrete
629	Menemen Gazi Ortaokulu	Menemen	38.60674	27.09301	2003	1998	3	w/	Reinforced Concrete
630	Huriye Mehmet Akçasakız Ortaokulu	Menemen	38.59541	27.05805	1997	1975	4	w/	Reinforced Concrete
631	Miyase İnceer Ortaokulu	Menemen	38.60223	27.08795	2019	2018	4	w/	Reinforced Concrete
632	Maltepe Ortaokulu	Menemen	38.62931	26.90878	2010	2007	3	w/o	Reinforced Concrete
633	Bülent Okan Ortaokulu	Menemen	38.52723	27.0364	1962	1961	2	w/	Reinforced Concrete
634	Türkelli Ortaokulu	Menemen	38.68578	27.03087	2022	2018	3	w/	Reinforced Concrete
635	Haldun Koşay Anadolu Lisesi	Menemen	38.58639	27.0755	1992	1975	4	w/	Reinforced Concrete
636	Toki Ahıska Kent Ortaokulu	Menemen	38.56161	27.06103	2014	2007	4	w/	Reinforced Concrete

637	Şehit Ahmet Özsoy Fen Lisesi	Menemen	38.60467	27.08614	2016	2007	6	w/o	Reinforced Concrete
638	Şehit Hakan Gülşen Anadolu İmam Hatip Lisesi	Menemen	38.60468	27.08538	2016	2007	7	w/	Reinforced Concrete
639	Uluğ Bey Çok Programlı Anadolu Lisesi	Menemen	38.55169	27.05761	2017	2007	3	w/	Reinforced Concrete
640	İhsan Çelikten Ortaokulu	Narlıdere	38.3895	27.00753	1999	1998	3	w/	Reinforced Concrete
641	Mehmet Seyfi Eraltay Anadolu Lisesi	Narlıdere	38.39452	27.01476	1963	1961	3	w/	Reinforced Concrete
642	Cahide Ahmet Dalyanoğlu Anadolu Lisesi	Narlıdere	38.39011	27.00819	2009	2007	4	w/	Reinforced Concrete
643	Oğuzhan Ortaokulu	Narlıdere	38.393	27.01433	1999	1998	2	w/	Reinforced Concrete
644	Rasim Önel Mesleki ve Teknik Anadolu Lisesi	Narlıdere	38.39508	26.98969	1994	1975	4	w/	Reinforced Concrete
645	Kılıçaslan Ortaokulu	Narlıdere	38.39142	27.02287	2005	1998	2	w/o	Reinforced Concrete
646	Didem Işıklı Ortaokulu	Narlıdere	38.38127	26.93436	2002	1998	2	w/	Reinforced Concrete
647	Hasan İçyer Ortaokulu	Narlıdere	38.38023	27.01361	2003	1998	2	w/	Reinforced Concrete
648	Prof. Dr. Aziz Sancar Ortaokulu	Narlıdere	38.39233	26.98915	2007	1998	3	w/	Reinforced Concrete

649	Anadolu İmam Hatip Lisesi	Narlıdere	38.39311	27.01358	1999	1998	2	w/	Reinforced Concrete
650	Arkas Narlıdere Mesleki ve Teknik Anadolu Lisesi	Narlıdere	38.39477	26.98903	2014	2007	4	w/	Reinforced Concrete
651	Aydinoğlu Mehmet Bey Anadolu İmam Hatip Lisesi	Ödemiş	38.24161	28.03017	2013	2007	4	w/	Reinforced Concrete
652	3 EylülYatılı Bölge Ortaokulu	Ödemiş	38.23577	27.96714	2001	1998	3	w/	Reinforced Concrete
653	Cumhuriyet Ortaokulu	Ödemiş	38.22645	27.96277	2003	1998	3	w/	Reinforced Concrete
654	Hulusi Uçaçelik Anadolu Lisesi	Ödemiş	38.22959	27.99498	1995	1975	4	w/	Reinforced Concrete
655	Ovakent Çok Programlı Anadolu Lisesi	Ödemiş	38.10911	28.01881	1964	1961	2	w/	Masonry
656	Anadolu Lisesi	Ödemiş	38.22708	27.98042	2012	2007	4	w/	Reinforced Concrete
657	Ticaret Odası Anadolu Lisesi	Ödemiş	38.24131	28.02883	2009	2007	4	w/	Reinforced Concrete
658	Ayhan Kökmen Fen Lisesi	Ödemiş	38.24233	28.02986	2014	2007	4	w/	Reinforced Concrete
659	Kaymakçı Çok Programlı Anadolu Lisesi	Ödemiş	38.169	28.11125	1972	1961	2	w/o	Masonry
660	İlkkurşun Mesleki ve Teknik Anadolu Lisesi	Ödemiş	38.23516	27.98259	1997	1975	3	w/	Reinforced Concrete

661	Prof. Dr. Muzaffer Kula Anadolu Lisesi	Ödemiş	38.22766	27.96585	2001	1998	3	w/o	Reinforced Concrete
662	Zübeyde Hanım Mesleki ve Teknik Anadolu Lisesi	Ödemiş	38.23271	27.97856	1977	1975	4	w/	Reinforced Concrete
663	Hatipoğlu Mustafa Erdem Ortaokulu	Ödemiş	38.22158	27.98054	2002	1998	3	w/o	Reinforced Concrete
664	Hatipoğlu Hasan Erdem Ortaokulu	Ödemiş	38.23158	28.0032	1996	1975	4	w/	Reinforced Concrete
665	Kaymakçı Türk Hava Kurumu Ortaokulu	Ödemiş	38.16261	28.11386	N/A	N/A	3	w/	Reinforced Concrete
666	Mustafa Ayşe Yanbastı Ortaokulu	Ödemiş	38.25314	27.99217	2008	2007	3	w/	Reinforced Concrete
667	Ovakent Ortaokulu	Ödemiş	38.10792	28.01956	1997	1975	1	w/	Masonry
668	Zeytinlik Sabahattin Şenocak Ortaokulu	Ödemiş	38.27117	28.00533	2005	1998	3	w/	Reinforced Concrete
669	Birgi Kazımpaşa Ortaokulu	Ödemiş	38.2537	28.06597	2004	1998	2	w/	Reinforced Concrete
670	50. Yıl Ortaokulu	Ödemiş	38.23069	27.98105	1973	1961	3	w/o	Reinforced Concrete
671	Ödemiş Ortaokulu	Ödemiş	38.23134	27.9723	1937	N/A	2	w/o	Masonry
672	Bademli Ortaokulu	Ödemiş	38.08651	28.05975	1970	1961	2	w/o	Masonry
673	Yeniceköy Ortaokulu	Ödemiş	38.24038	27.95025	2011	2007	1	w/o	Masonry
674	Hamamköy Ortaokulu	Ödemiş	38.01306	27.9896	2014	2007	2	w/o	Reinforced Concrete
675	Çaylı Ortaokulu	Ödemiş	38.14867	28.14472	1970	1961	1	w/o	Masonry

676	Kayaköy Ortaokulu	Ödemiş	38.20601	27.82014	1976	1975	3	w/	Reinforced Concrete
677	Şehit Er Kamil Alkan Ortaokulu	Ödemiş	38.11078	27.99253	2003	1998	1	w/	Reinforced Concrete
678	Şehit Er Süleyman Özdemir Ortaokulu	Ödemiş	38.20013	28.04754	2003	1998	3	w/	Reinforced Concrete
679	Birgi Fazlı Alpay Mesleki ve Teknik Anadolu Lisesi	Ödemiş	38.2498	28.06035	1991	1975	3	w/	Reinforced Concrete
680	Bıçakçı Bedriye Baykaş Ortaokulu	Ödemiş	38.07064	28.10341	2008	2007	1	w/	Masonry
681	Mesleki ve Teknik Anadolu Lisesi	Ödemiş	38.22941	27.97902	1968	1961	2	w/	Reinforced Concrete
682	İmam Birgivi Anadolu İmam Hatip Lisesi	Ödemiş	38.23342	27.97778	2016	2007	2	w/	Reinforced Concrete
683	Şehit Yasin Naci Ağaroğlu İmam Hatip Ortaokulu	Ödemiş	38.22347	27.97561	2016	2007	3	w/	Reinforced Concrete
684	Şehit Polis Gökhan Kirazlı Ortaokulu	Ödemiş	38.24271	28.00455	2014	2007	4	w/	Reinforced Concrete
685	Gazi Umurbey Mesleki ve Teknik Anadolu Lisesi	Ödemiş	38.23297	27.96372	2020	2018	4	w/	Reinforced Concrete
686	Asil Nadir Anadolu Lisesi	Seferihisar	38.19921	26.83668	1989	1975	4	w/	Reinforced Concrete
687	Salih Değerli Anadolu Lisesi	Seferihisar	38.08058	26.95878	1998	1975	2	w/	Reinforced Concrete

688	Necat Hepkon Anadolu Lisesi	Seferihisar	38.19252	26.8398	2015	2007	3	w/	Reinforced Concrete
689	Borsa İstanbul Mesleki ve Teknik Anadolu Lisesi	Seferihisar	38.22582	26.82845	2003	1998	4	w/	Reinforced Concrete
690	Semiha İrfan Çalı Mesleki ve Teknik Anadolu Lisesi	Seferihisar	38.20045	26.83944	1992	1975	3	w/	Reinforced Concrete
691	Ulaş Ortaokulu	Seferihisar	38.24828	26.83415	2012	2007	3	w/o	Reinforced Concrete
692	Soner Değerli Ürkmez Ortaokulu	Seferihisar	38.07834	26.95707	1994	1975	4	w/o	Reinforced Concrete
693	Muharrem Gülpınar Ortaokulu	Seferihisar	38.20051	26.83868	1995	1975	3	w/	Reinforced Concrete
694	Tepecik Ortaokulu	Seferihisar	38.18061	26.83537	1998	1975	1	w/	Masonry
695	Doğanbey Payamlı Ortaokulu	Seferihisar	38.07919	26.92786	2006	1998	1	w/	Masonry
696	Sığacık 80. Yıl Cumhuriyet Ortaokulu	Seferihisar	38.19329	26.7895	2002	1998	2	w/o	Reinforced Concrete
697	Yeni Orhanlı Ortaokulu	Seferihisar	38.16928	26.95478	1981	1975	2	w/o	Reinforced Concrete
698	Uluslararası Seferihisar İMKB Anadolu İmam Hatip Lisesi	Seferihisar	38.22597	26.82875	2000	1998	2	w/o	Reinforced Concrete
699	Müşerref Hepkon Ortaokulu	Seferihisar	38.19442	26.84239	2016	2007	3	w/	Reinforced Concrete

700	Şehit Erol Olçok Anadolu Lisesi	Selçuk	37.94503	27.36815	1984	1975	3	w/o	Reinforced Concrete
701	Şehit Polis Demet Sezen Mesleki ve Teknik Anadolu Lisesi	Selçuk	37.94586	27.37051	2007	1998	4	w/o	Reinforced Concrete
702	Borsa İstanbul Şehit Ömer Halisdemir Anadolu Lisesi	Selçuk	37.94644	27.37017	2005	1998	4	w/	Reinforced Concrete
703	Şehit Er Mehmet Yüce Borsa İstanbul Mesleki ve Teknik Anadolu Lisesi	Selçuk	37.94703	27.37072	2006	1998	3	w/	Reinforced Concrete
704	Belevi Şehit Yüzbaşı Cengiz Topel Ortaokulu	Selçuk	38.01536	27.44669	N/A	N/A	2	w/o	Reinforced Concrete
705	19 Mayıs Ortaokulu	Selçuk	37.94158	27.37214	1990	1975	3	w/o	Reinforced Concrete
706	Şehit Abdullah Tayyip Olçok Anadolu İmam Hatip Lisesi	Selçuk	37.94491	27.36751	2011	2007	2	w/	Reinforced Concrete
707	Fatma Günay Ortaokulu	Selçuk	37.95628	27.37553	2017	2007	3	w/	Reinforced Concrete
708	Gazi Mustafa Kemal Ortaokulu	Selçuk	37.9466	27.36936	2001	1998	3	w/	Reinforced Concrete
709	80. Yıl Çamlık Ortaokulu	Selçuk	37.88558	27.38681	N/A	N/A	3	w/	Reinforced Concrete
710	Hasan Fatma Önal Ortaokulu	Selçuk	37.83842	27.38439	N/A	N/A	2	w/	Reinforced Concrete

711	Cumhuriyet Ortaokulu	Selçuk	37.94142	27.37596	2018	2007	3	w/	Reinforced Concrete
712	Anadolu İmam Hatip Lisesi	Tire	38.09541	27.7256	1981	1975	4	w/	Reinforced Concrete
713	Kurtuluş Ortaokulu	Tire	38.08936	27.73418	2000	1998	2	w/	Reinforced Concrete
714	Şehit Albay İbrahim Karaoğlanoğlu Anadolu Lisesi	Tire	38.08849	27.73101	2004	1998	5	w/	Reinforced Concrete
715	Ahi Evran Mesleki ve Teknik Anadolu Lisesi	Tire	38.08681	27.73081	1944	N/A	2	w/	Reinforced Concrete
716	İsa Bey Mesleki ve Teknik Anadolu Lisesi	Tire	38.09231	27.72269	2018	2007	4	w/	Reinforced Concrete
717	Ersan Kirazoğlu Mesleki ve Teknik Anadolu Lisesi	Tire	38.10147	27.73206	2011	2007	3	w/	Reinforced Concrete
718	Mesleki ve Teknik Anadolu Lisesi	Tire	38.08997	27.73394	1984	1975	4	w/	Reinforced Concrete
719	Kutsan Anadolu Lisesi	Tire	38.09644	27.72169	1992	1975	3	w/	Reinforced Concrete
720	Öğretmen Melahat Aksoy Sosyal Bilimler Lisesi	Tire	38.10158	27.72308	2010	2007	4	w/	Reinforced Concrete
721	Eskioba Ortaokulu	Tire	38.11133	27.61525	1994	1975	2	w/o	Reinforced Concrete
722	Toki Şehit Mehmet Çağlar Bölük Ortaokulu	Tire	38.12583	27.72916	2014	2007	3	w/	Reinforced Concrete

723	Atatürk Ortaokulu	Tire	38.0862	27.7409	2002	1998	3	w/o	Reinforced Concrete
724	Eğridere İbrahim Kardiçalı Ortaokulu	Tire	38.05902	27.89943	2000	1998	2	w/o	Masonry
725	Fatih Ortaokulu	Tire	38.09458	27.72361	1994	1975	3	w/	Reinforced Concrete
726	Kireli Ahmet Taner Kışlalı Ortaokulu	Tire	38.10152	27.83113	N/A	N/A	3	w/	Reinforced Concrete
727	Şehit Burhan Aktürk Ortaokulu	Tire	38.08781	27.74844	1965	1961	2	w/	Masonry
728	Gökçen Keziban ve Öğretmen Hüsamettin Bayındır Ortaokulu	Tire	38.12594	27.869	2015	2007	1	w/o	Masonry
729	Yeniçiftlik Ortaokulu	Tire	38.12156	27.49997	1944	N/A	2	w/	Masonry
730	80. Yıl Cumhuriyet Ortaokulu	Tire	38.08556	27.73458	2012	2007	2	w/	Reinforced Concrete
731	Büyükkale Mediha İçel Ortaokulu	Tire	38.04447	27.55403	1974	1961	1	w/o	Masonry
732	Gökçen Anadolu Lisesi	Tire	38.11361	27.87	2013	2007	2	w/o	Reinforced Concrete
733	Dörteylül Ortaokulu	Tire	38.08839	27.72839	1986	1975	2	w/	Reinforced Concrete
734	Belgin Atıla Çallıoğlu Fen Lisesi	Tire	38.09833	27.71236	2012	2007	3	w/	Reinforced Concrete
735	Başköy Ortaokulu	Tire	37.9983	27.66108	2001	1998	2	w/o	Reinforced Concrete

736	Şehit Mehmet Oruç İmam Hatip Ortaokulu	Tire	38.09585	27.73694	2010	2007	4	w/	Reinforced Concrete
737	15 Temmuz Şehitleri Ortaokulu	Tire	38.09926	27.7295	2010	2007	4	w/	Reinforced Concrete
738	Şehit Kadir Altuntaş Cumhuriyet Ortaokulu	Torbali	38.15853	27.34986	2000	1998	4	w/	Reinforced Concrete
739	Türk Telekom Mesleki ve Teknik Anadolu Lisesi	Torbali	38.24292	27.26289	2006	1998	5	w/	Reinforced Concrete
740	Özbey Ortaokulu	Torbali	38.13389	27.32172	2017	2007	4	w/	Reinforced Concrete
741	Anadolu İmam Hatip Lisesi	Torbali	38.15017	27.34781	2019	2018	4	w/	Reinforced Concrete
742	Anadolu Lisesi	Torbali	38.16517	27.35511	1993	1975	4	w/	Reinforced Concrete
743	Şehit Uzman Çavuş Harun Şenözür Mesleki ve Teknik Anadolu Lisesi	Torbali	38.15042	27.35744	1980	1975	3	w/	Reinforced Concrete
744	Atatürk Anadolu Lisesi	Torbali	38.15225	27.35631	1971	1961	4	w/	Reinforced Concrete
745	Piri Reis Mesleki ve Teknik Anadolu Lisesi	Torbali	38.17915	27.35384	2013	2007	3	w/	Reinforced Concrete
746	Cengiz Topel Ortaokulu	Torbali	38.15333	27.36209	1993	1975	3	w/o	Reinforced Concrete
747	Ayrancılar Ortaokulu	Torbali	38.2395	27.28119	2012	2007	5	w/	Reinforced Concrete

748	Çapak Ortaokulu	Torbalı	38.23096	27.35329	N/A	N/A	3	w/	Reinforced Concrete
749	Toki Mehmet Akif Ersoy Ortaokulu	Torbalı	38.22414	27.29108	2009	2007	3	w/	Reinforced Concrete
750	Mustafa Çoban Ortaokulu	Torbalı	38.16927	27.35377	1992	1975	3	w/	Reinforced Concrete
751	Yavuz Sultan Selim Ortaokulu	Torbalı	38.24653	27.27406	2014	2007	4	w/o	Reinforced Concrete
752	Dirmil Ortaokulu	Torbalı	38.24533	27.42278	1989	1975	1	w/	Reinforced Concrete
753	Yazıbaşı Ortaokulu	Torbalı	38.23667	27.32047	1988	1975	3	w/o	Reinforced Concrete
754	80. Yıl Çaybaşı Ortaokulu	Torbalı	38.13842	27.37705	2002	1998	3	w/o	Reinforced Concrete
755	Çetineller Ortaokulu	Torbalı	38.17978	27.34958	2001	1998	4	w/o	Reinforced Concrete
756	Yeniköy Ortaokulu	Torbalı	38.12219	27.33029	2000	1998	1	w/o	Masonry
757	7 Eylül Ortaokulu	Torbalı	38.14652	27.36418	1999	1998	2	w/	Masonry
758	Ticaret Odası 80. Yıl Ortaokulu	Torbalı	38.15206	27.35094	2005	1998	4	w/o	Reinforced Concrete
759	Kazımpaşa Ortaokulu	Torbalı	38.15178	27.35756	1932	N/A	2	w/	Reinforced Concrete
760	Şehit Teğmen Serdar Genç Ortaokulu	Torbalı	38.15964	27.35506	2002	1998	3	w/	Reinforced Concrete
761	Dağkızılca Ortaokulu	Torbalı	38.30764	27.39328	2015	2007	3	w/	Reinforced Concrete

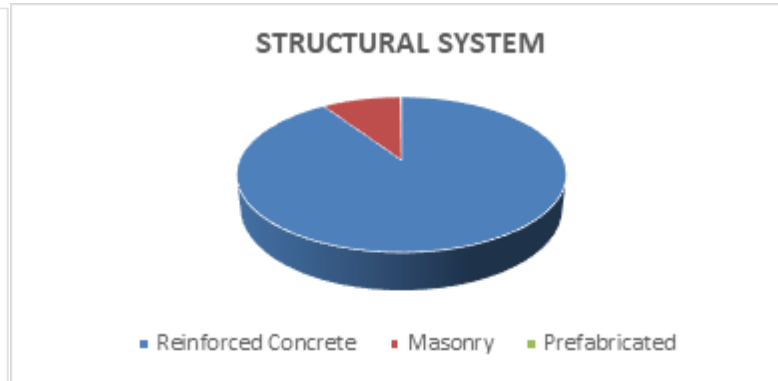
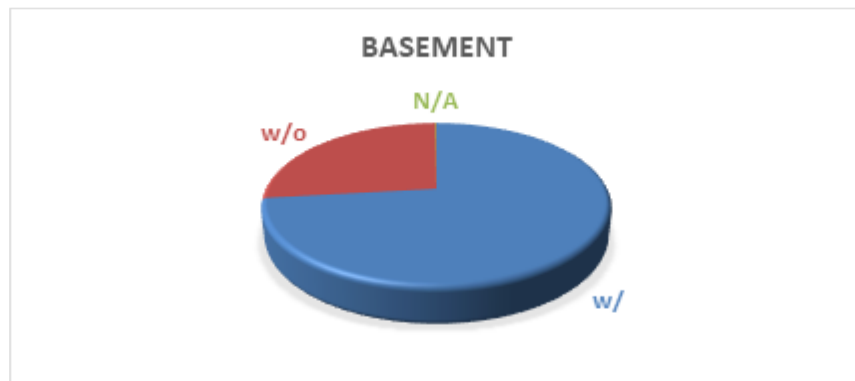
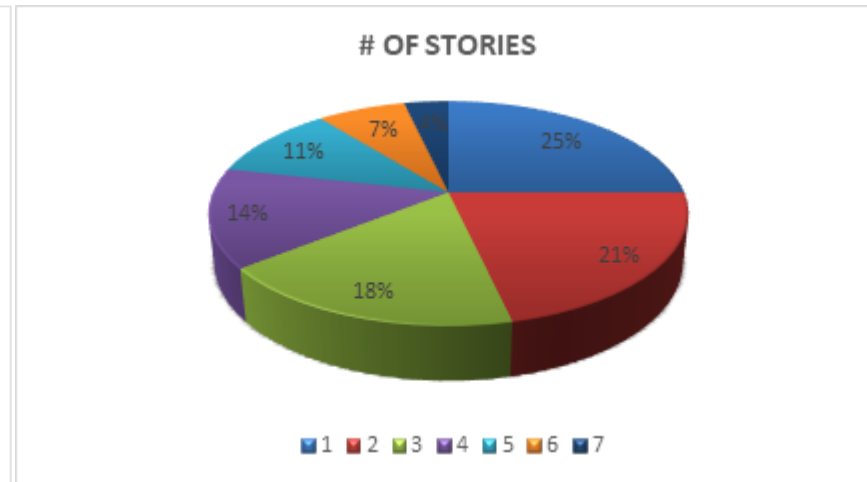
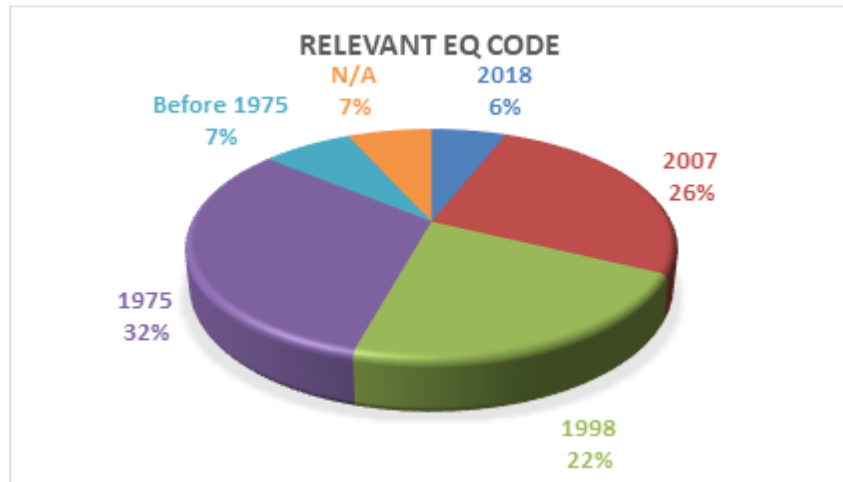
762	Uluğbey Ortaokulu	Torbalı	38.24336	27.32006	2022	2018	3	w/	Reinforced Concrete
763	Şehit Uzman Onbaşı Mustafa Eser İmam Hatip Ortaokulu	Torbalı	38.15997	27.36108	2012	2007	5	w/o	Reinforced Concrete
764	Pancar Nezihe Şairoğlu Ortaokulu	Torbalı	38.19592	27.23497	2012	2007	3	w/	Reinforced Concrete
765	Karakuyu Ortaokulu	Torbalı	38.23975	27.39077	1967	1961	2	w/o	Masonry
766	Hasan Salih Çetinel Ortaokulu	Torbalı	38.16212	27.36477	2017	2007	3	w/	Reinforced Concrete
767	Şehit Çavuş Haydar Arda Erertingi Ortaokulu	Torbalı	38.14889	27.37176	2002	1998	3	w/	Reinforced Concrete
768	Şehit Onur Ensar Ayanoğlu Ortaokulu	Torbalı	38.23947	27.26856	2016	2007	4	w/	Reinforced Concrete
769	Ayrancılar Anadolu İmam Hatip Lisesi	Torbalı	38.24283	27.2866	2011	2007	3	w/	Reinforced Concrete
770	Subaşı Ortaokulu	Torbalı	38.11012	27.43061	2019	2018	4	w/	Reinforced Concrete
771	İbni Sina Mesleki ve Teknik Anadolu Lisesi	Torbalı	38.1579	27.35022	1998	1975	2	w/	Reinforced Concrete
772	Kuşçuburun Barbaros Ortaokulu	Torbalı	38.21661	27.32852	N/A	N/A	2	w/o	Reinforced Concrete
773	Cumhuriyet Mesleki ve Teknik Anadolu Lisesi	Torbalı	38.17161	27.35608	2010	2007	4	w/	Reinforced Concrete

774	Pamukyazı Tamsa Seramik Fabrikası A.Ş. Ortaokulu	Torbalı	38.11885	27.40548	2000	1998	2	w/o	Masonry
775	Ahmetli Ortaokulu	Torbalı	38.08278	27.35458	1999	1998	2	w/o	Masonry
776	Sema Karhan Anadolu Lisesi	Torbalı	38.21961	27.31836	2010	2007	3	w/o	Reinforced Concrete
777	Subaşı Mustafa Topalan Çok Programlı Anadolu Lisesi	Torbalı	38.10564	27.4363	1994	1975	3	w/o	Reinforced Concrete
778	Şehit Uzman Çavuş Tolga Sağlam Kız Anadolu İmam Hatip Lisesi	Torbalı	38.14274	27.36333	2015	2007	3	w/	Reinforced Concrete
779	Şehit Önder Turgay Anadolu Lisesi	Torbalı	38.2392	27.25797	2018	2007	4	w/	Reinforced Concrete
780	Ayrancılar Şehit Cengiz Tokur Kız Anadolu İmam Hatip Lisesi	Torbalı	38.24219	27.28633	2018	2007	4	w/	Reinforced Concrete
781	Fatih Ortaokulu	Torbalı	38.15453	27.36698	2021	2018	4	w/o	Reinforced Concrete
782	80. Yıl Gazi Ortaokulu	Urla	38.32514	26.75694	2003	1998	4	w/	Reinforced Concrete
783	Avni Kaya Kokucu Ortaokulu	Urla	38.33244	26.64351	1978	1975	2	w/o	Reinforced Concrete
784	Bademler Ortaokulu	Urla	38.27578	26.83211	2003	1998	2	w/	Reinforced Concrete

785	Egiad Ortaokulu	Urla	38.32564	26.77253	2003	1998	2	w/o	Reinforced Concrete
786	İzmir Cengiz Aytmatov Sosyal Bilimler Lisesi	Urla	38.36314	26.82501	2007	1998	3	w/o	Reinforced Concrete
787	Anadolu Lisesi	Urla	38.32964	26.76767	1978	1975	4	w/	Reinforced Concrete
788	Mesleki ve Teknik Anadolu Lisesi	Urla	38.33082	26.76595	1986	1975	4	w/	Reinforced Concrete
789	Hakan Çeken Anadolu Lisesi	Urla	38.35178	26.82086	2007	1998	4	w/	Reinforced Concrete
790	Yılay Hakan Çeken Mesleki ve Teknik Anadolu Lisesi	Urla	38.35436	26.79156	2010	2007	2	w/	Reinforced Concrete
791	Özbek Ortaokulu	Urla	38.36483	26.70646	1945	N/A	1	w/o	Masonry
792	İmam Hatip Ortaokulu	Urla	38.32888	26.76775	2019	2018	3	w/	Reinforced Concrete
793	İskele Ortaokulu	Urla	38.36368	26.77048	1991	1975	2	w/o	Reinforced Concrete
794	Balıkliova Ortaokulu	Urla	38.42651	26.57811	2008	2007	1	w/o	Prefabricated
795	Anadolu İmam Hatip Lisesi	Urla	38.32111	26.76499	2012	2007	1	w/	Masonry
796	İzmir Yadımevenler Derneği Kuşçular Ortaokulu	Urla	38.30029	26.75169	1999	1975	2	w/o	Reinforced Concrete
797	Jale Necdet Özbelge Ortaokulu	Urla	38.35556	26.81108	1999	1975	2	w/	Reinforced Concrete

798	Uzunkuyu Ortaokulu	Urla	38.28427	26.55368	1977	1975	2	w/	Reinforced Concrete
799	Perihan Mahmut Celalettin Demirgüreş Ortaokulu	Urla	38.39387	26.74345	2001	1998	2	w/	Reinforced Concrete
800	Asiye Hüseyin Akyüz Bilim Ortaokulu	Urla	38.32449	26.71004	1996	1975	2	w/	Reinforced Concrete
801	İkbal Mahmut Büyükkırcalı Ortaokulu	Urla	38.37052	26.85054	2021	2018	3	w/	Reinforced Concrete

A.2. Statistical Distribution of Schools in İzmir Province



A.3. Table of Schools in Çanakkale Province

	SCHOOL NAME	DISTRICT	LATITUDE	LONGITUDE	CONSTRUCTION YEAR	RELEVANT EQ CODE	# OF STORIES	BASEMENT	STRUCTURAL SYSTEM
1	Anadolu Lisesi	Çan	40.02836	27.04602	2014	2007	4	w/o	Reinforced Concrete
2	Mesleki ve Teknik Anadolu Lisesi	Çan	40.03372	27.04986	1990	1975	3	w/o	Reinforced Concrete
3	Fen Lisesi	Çan	40.02852	27.04612	2014	2007	4	w/o	Reinforced Concrete
4	Sevim Bodur Mesleki ve Teknik Anadolu Lisesi	Çan	40.01847	27.06092	2004	1998	2	w/o	Reinforced Concrete
5	Karşıyaka Hacı Fatma Bodur Mesleki ve Teknik Anadolu Lisesi	Çan	40.01719	27.05783	1999	1998	3	w/o	Reinforced Concrete
6	Etili Ortaokulu	Çan	39.98804	26.90045	1999	1998	4	w/	Reinforced Concrete
7	Anadolu İmam Hatip Lisesi	Çan	40.02158	27.05481	1994	1975	4	w/	Reinforced Concrete
8	Osman Caneri Ortaokulu	Çan	40.03292	27.04511	2009	2007	2	w/	Reinforced Concrete
9	Şehit Binbaşı Ercan Kurt Ortaokulu	Çan	39.96942	27.02333	2012	2007	3	w/o	Reinforced Concrete
10	Özer Ortaokulu	Çan	40.033	27.04533	2009	2007	4	w/	Reinforced Concrete
11	İbrahim Bodur Anadolu Lisesi	Çan	40.02411	27.0445	1992	1975	4	w/o	Reinforced Concrete
12	Kocayayla Ortaokulu	Çan	40.08803	26.99075	2011	2007	2	w/	Reinforced Concrete

13	Şehit Engin Eker Ortaokulu	Çan	40.02453	27.05458	1991	1975	4	w/o	Reinforced Concrete
14	23 Eylül Ortaokulu	Çan	40.02908	27.05119	2007	1998	4	w/o	Reinforced Concrete
15	Şehit Emin Aydın İmam Hatip Ortaokulu	Çan	40.02028	27.05585	2018	2007	4	w/	Reinforced Concrete
16	Cumhuriyet Ortaokulu	Merkez	40.1484	26.4075	1904	N/A	1	w/o	Masonry
17	Çanakkale Mesleki ve Teknik Anadolu Lisesi	Merkez	40.1508	26.4083	1959	1953	2	w/o	Masonry
18	İbn-i Sina Mesleki ve Teknik Anadolu Lisesi	Merkez	40.1517	26.4113	1963	1961	5	w/o	Reinforced Concrete
19	Erenköy Ortaokulu	Merkez	40.0112	26.3294	1970	1953	2	w/o	Masonry
20	Çanakkale Anadolu Lisesi	Merkez	40.1495	26.418	1982	1975	4	w/	Reinforced Concrete
21	Şemsettin Fatma Çamoğlu Ortaokulu	Merkez	40.1485	26.42	1985	1975	4	w/	Reinforced Concrete
22	Kumkale Ortaokulu	Merkez	39.9798	26.2423	1991	1975	3	w/	Reinforced Concrete
23	İbrahim Bodur Anadolu Lisesi	Merkez	40.1415	26.4082	1992	1975	4	w/o	Reinforced Concrete
24	Vahit Tuna Anadolu Lisesi	Merkez	40.1673	26.411	1994	1975	4	w/	Reinforced Concrete
25	Avukat İbrahim Mutlu Anadolu Lisesi	Merkez	40.0995	26.3997	1997	1975	3	w/o	Masonry
26	Kepez Mesleki ve Teknik Anadolu Lisesi	Merkez	40.0955	26.3893	2001	1998	2	w/	Reinforced Concrete
27	Akçapınar Ortaokulu	Merkez	39.9262	26.3197	2002	1975	2	w/o	Masonry

28	Çanakkale Borsa İstanbul Mesleki ve Teknik Lisesi	Merkez	40.1664	26.412	2003	1998	3	w/	Reinforced Concrete
29	Ali Haydar Önder Anadolu Lisesi	Merkez	40.1631	26.4124	2005	1998	3	w/	Reinforced Concrete
30	Hasan Ali Yücel Anadolu Lisesi	Merkez	40.1331	26.4153	2006	1998	4	w/	Reinforced Concrete
31	Türkiye Odalar ve Borsalar Birliği Sosyal Bilimler Lisesi	Merkez	40.0655	26.3825	2010	2007	4	w/	Reinforced Concrete
32	Çanakkale Fen Lisesi	Merkez	40.0669	26.3825	2010	2007	4	w/	Reinforced Concrete
33	Toki Anadolu Lisesi	Merkez	40.1005	26.4146	2010	2007	4	w/	Reinforced Concrete
34	Kepez Mehmet Akif Ersoy Ortaokulu	Merkez	40.0952	26.3911	2010	2007	2	w/	Masonry
35	Cevatpaşa Ortaokulu	Merkez	40.1679	26.4159	2011	2007	4	w/	Reinforced Concrete
36	Kepez Özel Eğitim Meslek Okulu	Merkez	40.0997	26.39	2011	2007	1	w/o	Masonry
37	Şinasi Figen Bayraktar Ortaokulu	Merkez	40.1412	26.4093	2013	2007	3	w/	Reinforced Concrete
38	Şehit Ömer Halisdemir İmam Hatip Ortaokulu	Merkez	40.1512	26.41	2014	2007	3	w/	Reinforced Concrete
39	Merkez Işıklar Muharrem Yılmaz Ortaokulu	Merkez	40.145	26.4791	2014	2007	3	w/o	Masonry
40	Anadolu İnam Hatip Lisesi	Merkez	40.1005	26.4136	2016	2007	4	w/	Reinforced Concrete

41	Şehit Cemal Demir Anadolu İmam Hatip Lisesi	Merkez	40.1377	26.417	2016	2007	4	w/	Reinforced Concrete
42	Atatürk Ortaokulu	Merkez	40.138	26.4164	2017	2007	4	w/	Reinforced Concrete
43	Akçansa Güzel Sanatlar Lisesi	Merkez	40.1191	26.4133	2017	2007	3	w/	Reinforced Concrete
44	Turgut Reis Ortaokulu	Merkez	40.1425	26.4031	2017	2007	3	w/	Reinforced Concrete
45	Hüseyin Akif Terzioğlu Ortaokulu	Merkez	40.1022	26.4084	2018	2007	4	w/	Reinforced Concrete
46	Hafız Halil Atan Ortaokulu	Merkez	40.1045	26.4019	2018	2007	3	w/	Reinforced Concrete
47	Şehit Kıvanç Kaşıkçı İmam Hatip Ortaokulu	Merkez	40.1672	26.4141	2018	2007	4	w/	Reinforced Concrete
48	Ömer Mart Ortaokulu	Merkez	40.1606	26.4141	2019	2018	4	w/	Reinforced Concrete
49	Tacettin Aslan Mesleki ve Teknik Anadolu Lisesi	Merkez	40.1633	26.4694	2020	2018	3	w/	Reinforced Concrete
50	Gazi Ortaokulu	Merkez	40.1484	26.4055	2022	2018	2	w/	Reinforced Concrete
51	Anadolu Lisesi	Ayvacık	39.59357	26.39726	2014	2007	4	w/o	Reinforced Concrete
52	Küçükkuşu Fernur Sözen Anadolu Lisesi	Ayvacık	39.55162	26.61114	2009	2007	3	w/o	Reinforced Concrete
53	Gülpınar Çok Programlı Anadolu Lisesi	Ayvacık	39.52942	26.12025	1995	1975	2	w/o	Masonry
54	Anadolu İnam Hatip Lisesi	Ayvacık	39.61244	26.40646	1980	1975	2	w/	Reinforced Concrete
55	Korubaşı Ortaokulu	Ayvacık	39.51383	26.25747	2020	2018	3	w/	Reinforced Concrete

56	Kösedere Ortaokulu	Ayvacık	39.62636	26.18089	1986	1975	2	w/o	Masonry
57	Şehit J. Uz. Çvş. Aycan Özdil Ortaokulu	Ayvacık	39.5285	26.12069	2020	2018	4	w/	Reinforced Concrete
58	Küçükkuyu Ferhun Sözen Ortaokulu	Ayvacık	39.55031	26.61236	2008	2007	4	w/o	Reinforced Concrete
59	Ümmühan Hatun Ortaokulu	Ayvacık	39.59725	26.40361	1950	N/A	2	w/o	Masonry
60	Atatürk Ortaokulu	Ayvacık	39.60608	26.40425	2002	1998	3	w/	Reinforced Concrete
61	Mehmet Akif Ersoy Mesleki ve Teknik Anadolu Lisesi	Ayvacık	39.59773	26.40431	1974	1961	3	w/o	Reinforced Concrete
62	Fen Lisesi	Ayvacık	39.60578	26.39486	2015	2007	3	w/	Reinforced Concrete
63	Atatürk Anadolu Lisesi	Bayramiç	39.8051	26.61814	1985	1975	2	w/	Reinforced Concrete
64	Mesleki ve Teknik Anadolu Lisesi	Bayramiç	39.80856	26.62036	2010	2007	4	w/	Reinforced Concrete
65	Mustafa Gülşen Çınaroğlu Anadolu Lisesi	Bayramiç	39.80433	26.60831	2008	2007	3	w/	Reinforced Concrete
66	Anadolu İmam Hatip Lisesi	Bayramiç	39.81239	26.61487	2021	2018	4	w/	Reinforced Concrete
67	Gazi Ortaokulu	Bayramiç	39.80528	26.61796	1989	1975	3	w/	Reinforced Concrete
68	Türkmeneli Ortaokulu	Bayramiç	39.76374	26.50123	2018	2007	3	w/o	Reinforced Concrete
69	Muratlar Ortaokulu	Bayramiç	39.94072	26.79772	2020	2018	3	w/	Reinforced Concrete
70	Cumhuriyet Ortaokulu	Bayramiç	39.80482	26.60861	2014	2007	2	w/o	Reinforced Concrete
71	Menderes Ortaokulu	Bayramiç	39.82008	26.6105	2003	1975	3	w/o	Reinforced Concrete

72	Evciler Şehit Osman Özkan Ortaokulu	Bayramiç	39.77422	26.77203	1991	1975	3	w/o	Reinforced Concrete
73	Yolindi Ortaokulu	Biga	40.14499	27.37073	1968	1961	2	w/o	Masonry
74	Balıkçeşme Ortaokulu	Biga	40.3125	27.07983	2015	2007	2	w/	Reinforced Concrete
75	Atatürk Anadolu Lisesi	Biga	40.23721	27.26424	1984	1975	4	w/	Reinforced Concrete
76	Çiçekli Dede özel İdare Ortaokulu	Biga	40.21575	27.243	2006	1975	4	w/	Reinforced Concrete
77	Ayşe Doğan Mesleki ve Teknik Anadolu Lisesi	Biga	40.22786	27.24594	2013	2007	2	w/	Reinforced Concrete
78	Safiye Hüseyin Elbi mesleki ve Teknik Anadolu Lisesi	Biga	40.23663	27.2641	1995	1975	3	w/o	Reinforced Concrete
79	İçdaş Biga Mesleki ve Teknik Anadolu Lisesi	Biga	40.24044	27.22928	2007	1998	4	w/	Reinforced Concrete
80	Gümüşçay Atatürk Ortaokulu	Biga	40.2842	27.28269	2016	2007	3	w/	Reinforced Concrete
81	Hamdibey Ortaokulu	Biga	40.23861	27.23183	2000	1998	3	w/	Reinforced Concrete
82	Hamdibey Mesleki ve Teknik Anadolu Lisesi	Biga	40.23871	27.26238	1993	1975	3	w/	Reinforced Concrete
83	Anadolu İmam Hatip Lisesi	Biga	40.24029	27.26513	2018	2007	4	w/	Reinforced Concrete
84	Mehmet Akif Ersoy Anadolu Lisesi	Biga	40.23722	27.26425	1988	1975	4	w/o	Reinforced Concrete
85	Yeniceköy Ortaokulu	Biga	40.22328	27.25408	2012	2007	3	w/o	Reinforced Concrete
86	İçdaş Fen Lisesi	Biga	40.22856	27.24625	1996	1975	4	w/	Reinforced Concrete
87	Biga Ortaokulu	Biga	40.22653	27.24589	N/A	N/A		N/A	Reinforced Concrete

88	Yeniçiftlik Ortaokulu	Biga	40.30672	27.18622	2008	2007	4	w/o	Reinforced Concrete
89	Dumlupınar Ortaokulu	Biga	40.22325	27.24122	1986	1975	3	w/o	Reinforced Concrete
90	İdriskoru İbrahim Aydın Ortaokulu	Biga	40.24539	27.2717	2007	1998	2	w/	Reinforced Concrete
91	Sinekçi Ortaokulu	Biga	40.27243	27.40812	1998	1975	3	w/o	Reinforced Concrete
92	Cumhuriyet Ortaokulu	Biga	40.24058	27.26518	1998	1975	4	w/o	Reinforced Concrete
93	Bakacak Ortaokulu	Biga	40.2036	27.0904	1997	1975	3	w/o	Reinforced Concrete
94	Karabiga Mustafa Kemal Ortaokulu	Biga	40.40428	27.30378	2023	2018	3	w/	Reinforced Concrete
95	Şehit Yarbay Raif Necdet Hoşgör İmam Hatip Ortaokulu	Biga	40.23055	27.25994	2018	2007	4	w/	Reinforced Concrete
96	Şehit İbrahim Ateş Kız Anadolu İmam Hatip Lisesi	Biga	40.23081	27.26011	2018	2007	4	w/	Reinforced Concrete
97	Gazi Anadolu Lisesi	Bozcaada	39.8321	26.07216	1978	1975	1	w/o	Masonry
98	İstiklal Ortaokulu	Bozcaada	39.83564	26.07133	1961	1953	1	w/o	Masonry
99	Opet Tarihe Saygı Ortaokulu	Eceabat	40.17926	26.35645	2012	1998	2	w/	Reinforced Concrete
100	Mehmet Akif Ersoy Anadolu Lisesi	Eceabat	40.18169	26.35972	1992	1975	3	w/o	Reinforced Concrete
101	Celalettin Topçu Anadolu Lisesi	Ezine	39.77106	26.34972	2013	1998	2	w/	Reinforced Concrete
102	Anadolu İmam Hatip Lisesi	Ezine	39.78269	26.32778	1982	1975	2	w/o	Reinforced Concrete

103	Mesleki ve Teknik Anadolu Lisesi	Ezine	39.78263	26.32777	2013	1998	3	w/	Reinforced Concrete
104	Geyikli Ortaokulu	Ezine	39.80419	26.20289	2010	1998	3	w/	Reinforced Concrete
105	Uluköy Ortaokulu	Ezine	39.71555	26.22315	1994	1975	3	w/o	Reinforced Concrete
106	Gazi Ortaokulu	Ezine	39.78394	26.34072	2012	1998	3	w/o	Reinforced Concrete
107	Sarısöğüt Ortaokulu	Ezine	39.73502	26.3849	1994	1975	1	w/o	Masonry
108	Cevatpaşa Ortaokulu	Ezine	39.78428	26.33278	1987	1975	3	w/	Reinforced Concrete
109	Mahmudiye Ortaokulu	Ezine	39.87253	26.23719	N/A	N/A	3	w/o	Reinforced Concrete
110	Yahyaçavuş Ortaokulu	Ezine	39.79006	26.34297	2018	2007	3	w/	Reinforced Concrete
111	İmam Hatip Ortaokulu	Ezine	39.78404	26.32608	2012	2007	1	w/o	Masonry
112	Bolayır Şehit Nuriye Ak Ortaokulu	Gelibolu	40.5145	26.7572	1982	1975	3	w/o	Reinforced Concrete
113	Gelibolu Anadolu Lisesi	Gelibolu	40.41017	26.6648	1994	1975	3	w/	Reinforced Concrete
114	Hakimiyeti Milliye Ortaokulu	Gelibolu	40.4126	26.6693	1986	1975	2	w/o	Reinforced Concrete
115	Ecebey Mesleki ve Teknik Anadolu Lisesi	Gelibolu	40.4158	26.6757	1990	1975	2	w/o	Reinforced Concrete
116	Atatürk Mesleki ve Teknik Anadolu Lisesi	Gelibolu	40.41606	26.6657	1993	1975	4	w/o	Reinforced Concrete
117	Mehmet Akif Ersoy Mesleki ve Teknik Anadolu Lisesi	Gelibolu	40.41544	26.67158	1971	1961	2	w/	Reinforced Concrete
118	100. Yıl Barış Ortaokulu	Gelibolu	40.42148	26.67165	2015	2007	3	w/	Reinforced Concrete

119	Yahya Çavuş Görme Engelliler Ortaokulu	Gelibolu	40.40787	26.66366	1946	N/A	1	w/o	Masonry
120	Namık Kemal Ortaokulu	Gelibolu	40.40777	26.67177	2009	2007	4	w/o	Reinforced Concrete
121	Evreşe Ortaokulu	Gelibolu	40.6633	26.88037	1990	1975	3	w/o	Reinforced Concrete
122	Armatör Yakup Aksoy Mesleki ve teknik Anadolu Lisesi	Gelibolu	40.40746	26.64062	1999	1998	4	w/o	Reinforced Concrete
123	Anadolu İnam Hatip Lisesi	Gelibolu	40.41644	26.6706	2016	2007	4	w/o	Reinforced Concrete
124	Fen Lisesi	Gelibolu	40.41624	26.6778	2021	2018	4	w/o	Reinforced Concrete
125	Mesleki ve Teknik Anadolu Lisesi	Gökçeada	40.19637	25.90275	2018	2007	3	w/o	Reinforced Concrete
126	Atatürk Anadolu Lisesi	Gökçeada	40.20028	25.90377	2018	2007	3	w/o	Reinforced Concrete
127	Gökçeada Ortaokulu	Gökçeada	40.19965	25.9035	2018	2007	3	w/o	Reinforced Concrete
128	İmam Hatip Ortaokulu	Gökçeada	40.2005	25.90374	2018	2007	3	w/o	Reinforced Concrete
129	Anadolu İmam Hatip Lisesi	Gökçeada	40.19983	25.90314	2018	2007	3	w/o	Reinforced Concrete
130	Eçialan Ortaokulu	Lapseki	40.16465	26.87808	N/A	N/A	3	w/	Reinforced Concrete
131	Anadolu İnam Hatip Lisesi	Lapseki	40.3225	26.65314	2018	2007	3	w/	Reinforced Concrete
132	Erol Çarmıklı Anadolu Lisesi	Lapseki	40.31984	26.65047	2021	2018	4	w/	Reinforced Concrete
133	Umurbey Ortaokulu	Lapseki	40.23655	26.60729	1988	1975	3	w/	Reinforced Concrete
134	İsmail Baykut Ortaokulu	Lapseki	40.35872	26.69525	2019	2007	4	w/	Reinforced Concrete

135	Şehit Hüseyin Çetin İmam Hatip Ortaokulu	Lapseki	40.34647	26.68514	2012	2007	2	w/	Reinforced Concrete
136	Plevne Ortaokulu	Lapseki	40.34772	26.68803	2017	2007	4	w/	Reinforced Concrete
137	Çardak Ortaokulu	Lapseki	40.37681	26.71928	2009	2007	2	w/	Reinforced Concrete
138	İçdaş-Çib Mesleki ve Teknik Anadolu Lisesi	Lapseki	40.32086	26.65169	2015	2007	4	w/	Reinforced Concrete
139	Hüseyin Akif Terzioğlu Ortaokulu	Lapseki	40.33915	26.67471	2009	2007	2	w/o	Reinforced Concrete
140	Akçakoyun Yatılı Bölge Ortaokulu	Yenice	39.8047	27.14729	1999	1975	3	w/	Reinforced Concrete
141	Kalkım Çok Programlı Anadolu Lisesi	Yenice	39.81303	27.20525	1996	1975	2	w/	Reinforced Concrete
142	Reyan Bodur Anadolu Lisesi	Yenice	39.93411	27.24139	2015	2007	4	w/	Reinforced Concrete
143	Mesleki ve Teknik Anadolu Lisesi	Yenice	39.92922	27.26336	1989	1975	4	w/	Reinforced Concrete
144	Cumhuriyet Ortaokulu	Yenice	39.92431	27.25636	1998	1975	3	w/	Reinforced Concrete
145	Yeşilyurt Ortaokulu	Yenice	39.92908	27.25407	2012	2007	2	w/	Reinforced Concrete
146	Atatürk Ortaokulu	Yenice	39.92906	27.26053	1997	1975	3	w/	Reinforced Concrete
147	Kalkım Ortaokulu	Yenice	39.81303	27.20892	2003	1998	4	w/	Reinforced Concrete
148	Pazarköy Şehit Halil Kandemir Ortaokulu	Yenice	39.85482	27.4008	2007	1998	3	w/	Reinforced Concrete
149	Hamdibey Ortaokulu	Yenice	39.85061	27.25794	1998	1975	4	w/	Reinforced Concrete
150	Çal Ortaokulu	Yenice	39.97652	27.15395	N/A	N/A	2	w/o	Reinforced Concrete

151	Mehmet Bodur Anadolu İmam Hatip Lisesi	Yenice	39.93384	27.25431	1989	1975	4	w/	Reinforced Concrete
152	Vali Muhterem İnce Fen Lisesi	Yenice	39.93563	27.2498	2023	2018	3	w/	Reinforced Concrete

A.4. Statistical Distribution of Schools in Çanakkale Province

