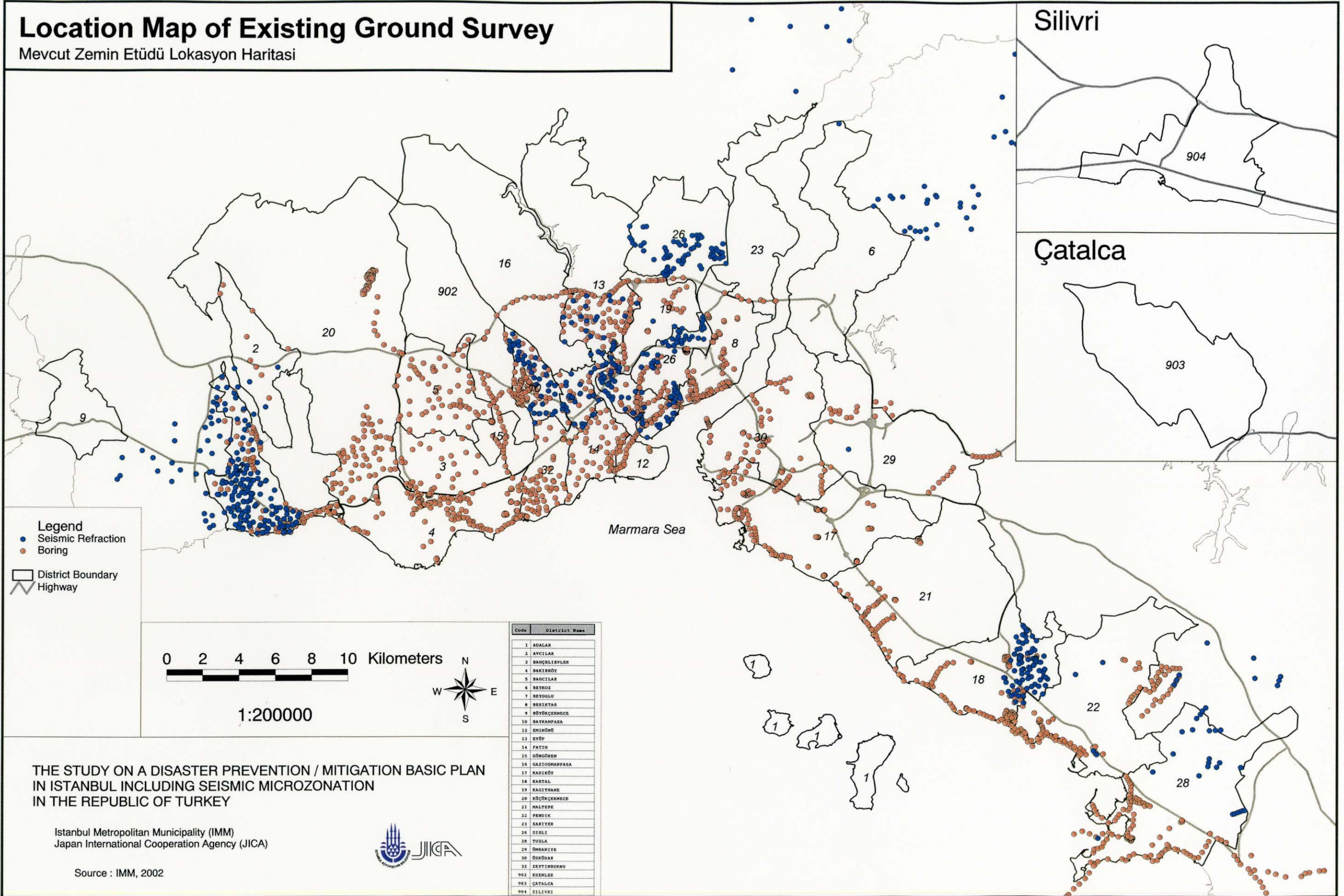


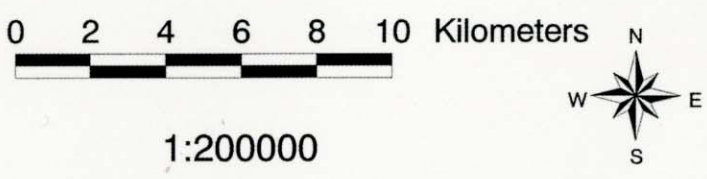
B. Earthquake Analysis

Location Map of Existing Ground Survey

Mevcut Zemin Etüdü Lokasyon Haritası



Legend
 ● Seismic Refraction
 ● Boring
 □ District Boundary
 ≡ Highway



Code	District Name
1	ADALAR
2	AVCILAR
3	BAĞÇELIYERLER
4	BAĞCIKÖY
5	BAĞCILAR
6	BEYKÖZ
7	BEYOĞLU
8	BEŞİKTAŞ
9	BÜYÜKÇERKEÇE
10	BAYRAMPAŞA
11	EMİRHÜNER
12	EYÜP
13	FATİH
14	GÖĞÜDEN
15	GAZİOSMANPAŞA
16	KADIKÖY
17	KARTAL
18	KAGITHANE
19	KÜÇÜKÇERKEÇE
20	HALIÇ
21	FENİÇİ
22	SARIER
23	SİSİLİ
24	TUZLA
25	ÜSKÜDAR
26	ZEYTİNBURNU
902	ESENLER
903	ÇATALCA
904	SİLİVRİ

THE STUDY ON A DISASTER PREVENTION / MITIGATION BASIC PLAN
 IN ISTANBUL INCLUDING SEISMIC MICROZONATION
 IN THE REPUBLIC OF TURKEY

Istanbul Metropolitan Municipality (IMM)
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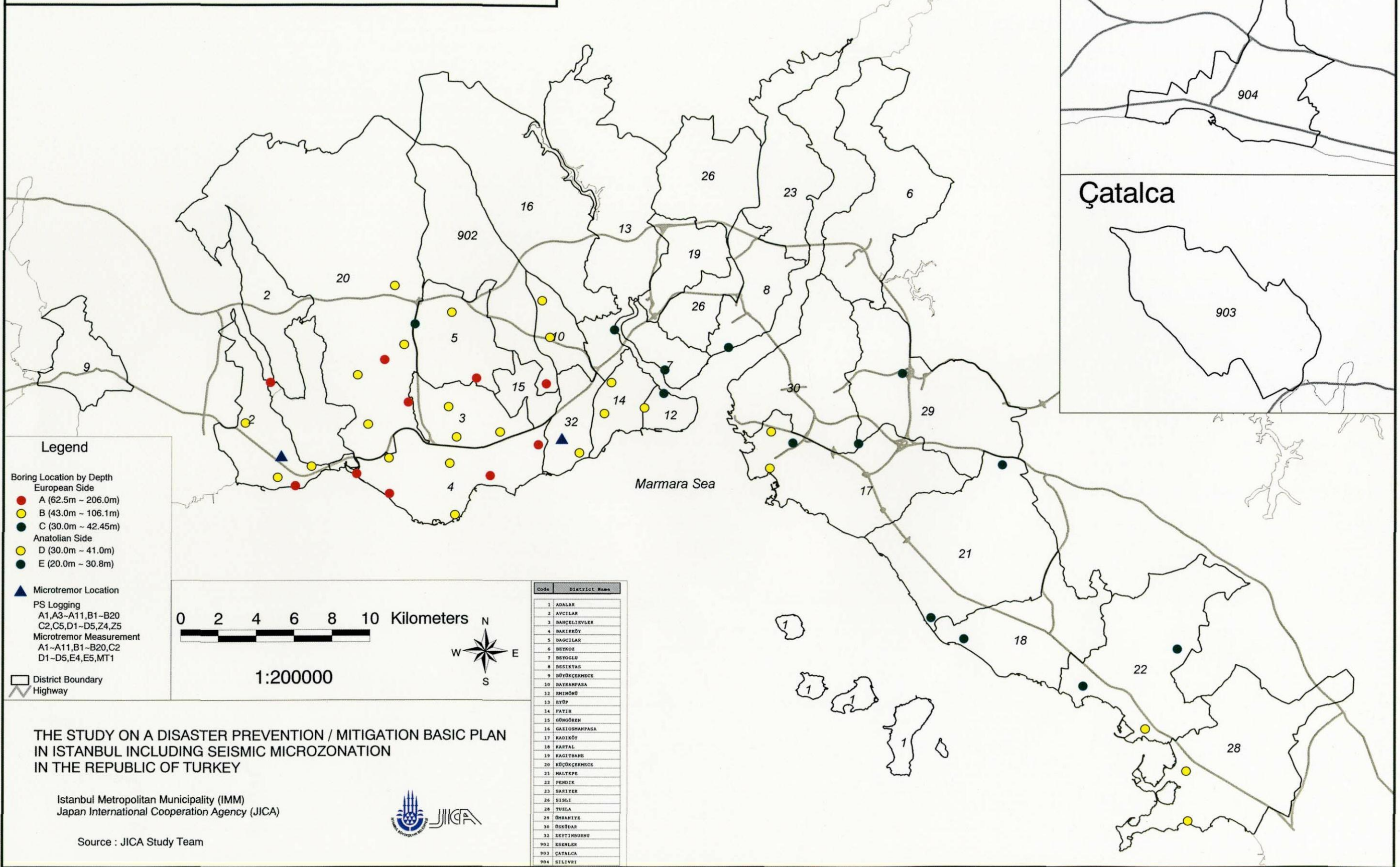


Source : IMM, 2002

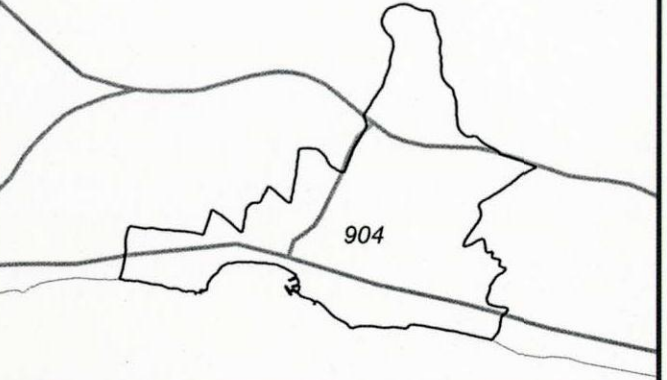
B-1 Location Map of Existing Ground Survey

Location Map of Geological Survey

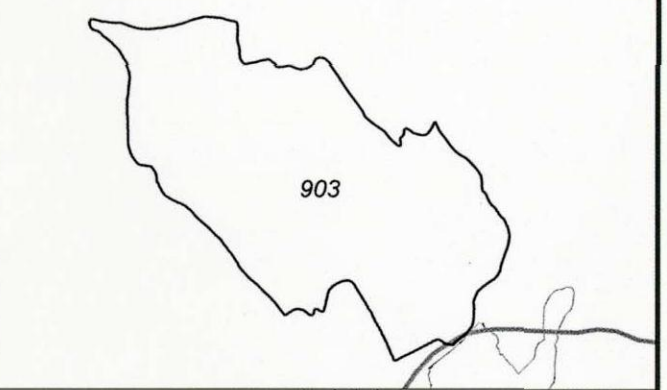
Jeolojik Etüd Lokasyon Haritasi



Silivri



Çatalca



Legend

Boring Location by Depth

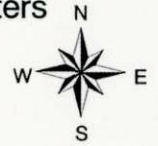
- European Side
- A (62.5m - 206.0m)
- B (43.0m - 106.1m)
- C (30.0m - 42.45m)
- Anatolian Side
- D (30.0m - 41.0m)
- E (20.0m - 30.8m)

- ▲ Microtremor Location
- PS Logging
- A1,A3-A11,B1-B20
- C2,C5,D1-D5,Z4,Z5
- Microtremor Measurement
- A1-A11,B1-B20,C2
- D1-D5,E4,E5,MT1

- District Boundary
- ▬ Highway

0 2 4 6 8 10 Kilometers

1:200000



Code	District Name
1	ADALAR
2	AVCILAR
3	BAHÇELİEVLER
4	BAKIRKÖY
5	BAGCILAR
6	BEYOĞLU
7	BEYOĞLU
8	BESIKTAS
9	BÜYÜKÇEKMECE
10	BAYRAMPAŞA
11	BEŞİKÖZ
12	BEŞİKÖZ
13	BEŞİKÖZ
14	FATİH
15	GÜNGÖREN
16	GAZİOSMANPAŞA
17	KADIKÖY
18	KARTAL
19	KAGITÇI
20	KÜÇÜKÇEKMECE
21	MALTEPE
22	PENDEK
23	SARIER
24	SİSİ
25	TUZLA
26	ÜSKÜDAR
27	ÜSKÜDAR
28	ÜSKÜDAR
29	ÜSKÜDAR
30	ÜSKÜDAR
31	ÜSKÜDAR
32	ÜSKÜDAR
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IN THE REPUBLIC OF TURKEY

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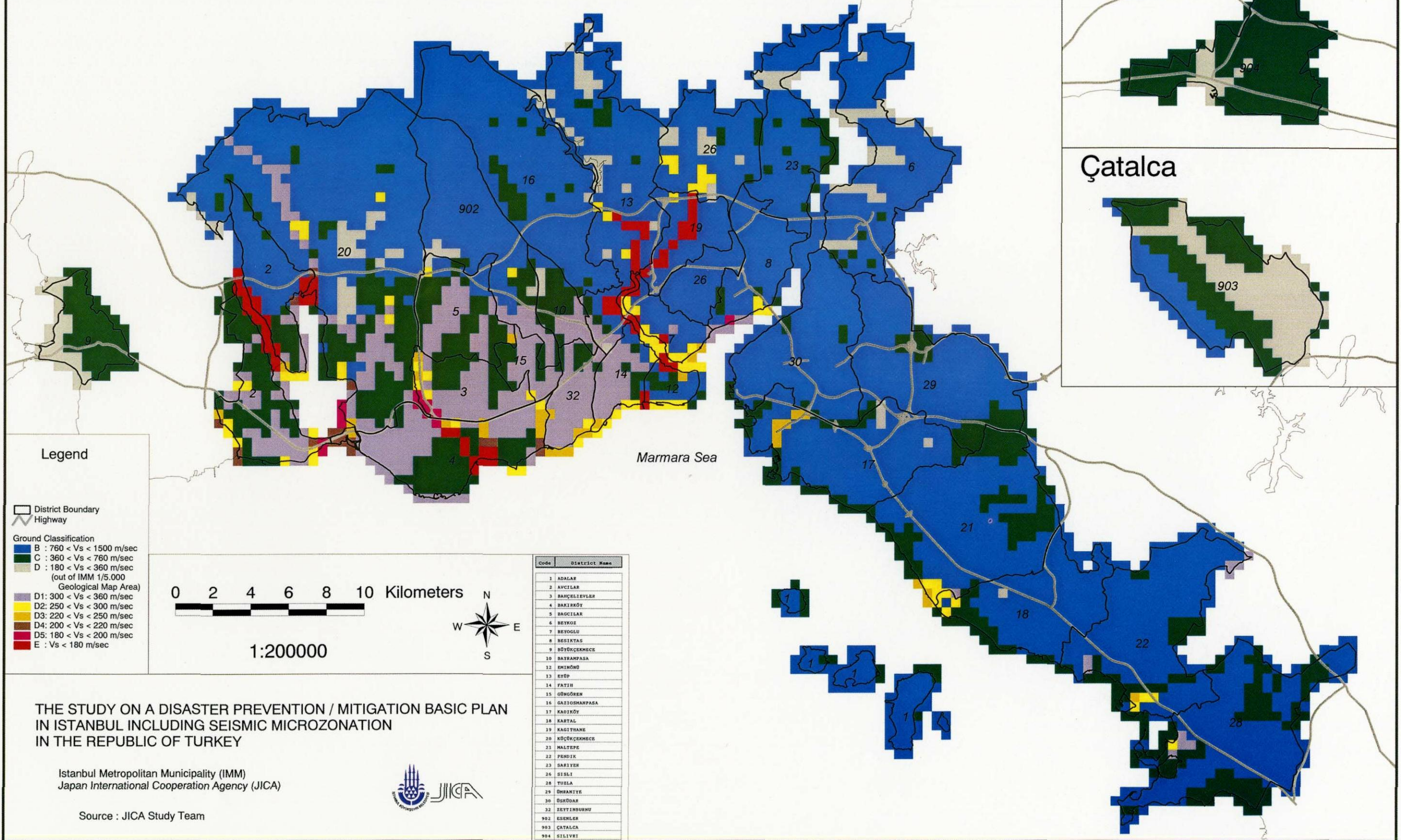


Source : JICA Study Team

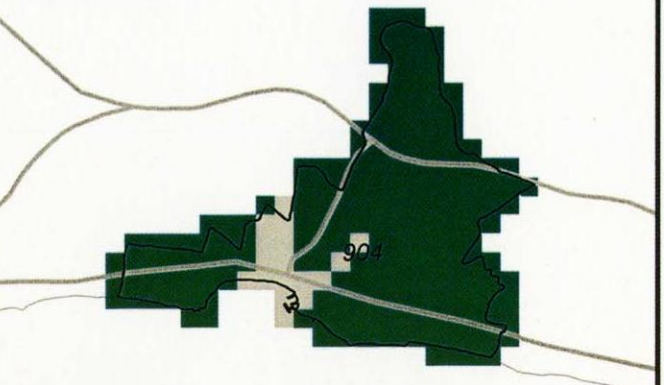
B-2 Location Map of Geological Survey

Ground Classification Map

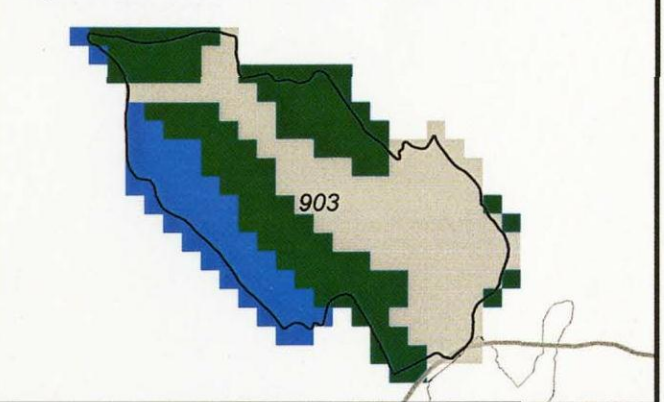
Zemin Siniflandirma Haritasi



Silivri



Çatalca



Legend

- District Boundary
- Highway
- Ground Classification**
- B : $760 < V_s < 1500$ m/sec
- C : $360 < V_s < 760$ m/sec
- D : $180 < V_s < 360$ m/sec (out of IMM 1/5.000 Geological Map Area)
- D1: $300 < V_s < 360$ m/sec
- D2: $250 < V_s < 300$ m/sec
- D3: $220 < V_s < 250$ m/sec
- D4: $200 < V_s < 220$ m/sec
- D5: $180 < V_s < 200$ m/sec
- E : $V_s < 180$ m/sec

0 2 4 6 8 10 Kilometers

1:200000



Code	District Name
1	ADALAR
2	AVCILAR
3	BANÇELİEVLER
4	BAKIRKÖY
5	BAGCILAR
6	BEYKOZ
7	BEYOĞLU
8	BESIKTAS
9	BÜYÜKÇEKMECE
10	BAŞAKPASA
11	EMİRHÖNÜ
12	EYÜP
13	FATİH
14	GÖĞÜSÖREN
15	GAZİOSMANPASA
16	KADIKÖY
17	KARTAL
18	KAGITÇI
19	KÜLTÜR
20	KÜÇÜKÇEKMECE
21	MALTEPE
22	PENDEK
23	SARIER
24	SİĞIRCI
25	TUZLA
26	ÜSKÜDAR
27	ŞİŞLİ
28	ÜSKÜDAR
29	ŞİŞLİ
30	ÜSKÜDAR
31	ŞİŞLİ
32	ÜSKÜDAR
902	ESENLER
903	ÇATALCA
904	SİLİVRİ

THE STUDY ON A DISASTER PREVENTION / MITIGATION BASIC PLAN IN ISTANBUL INCLUDING SEISMIC MICROZONATION IN THE REPUBLIC OF TURKEY

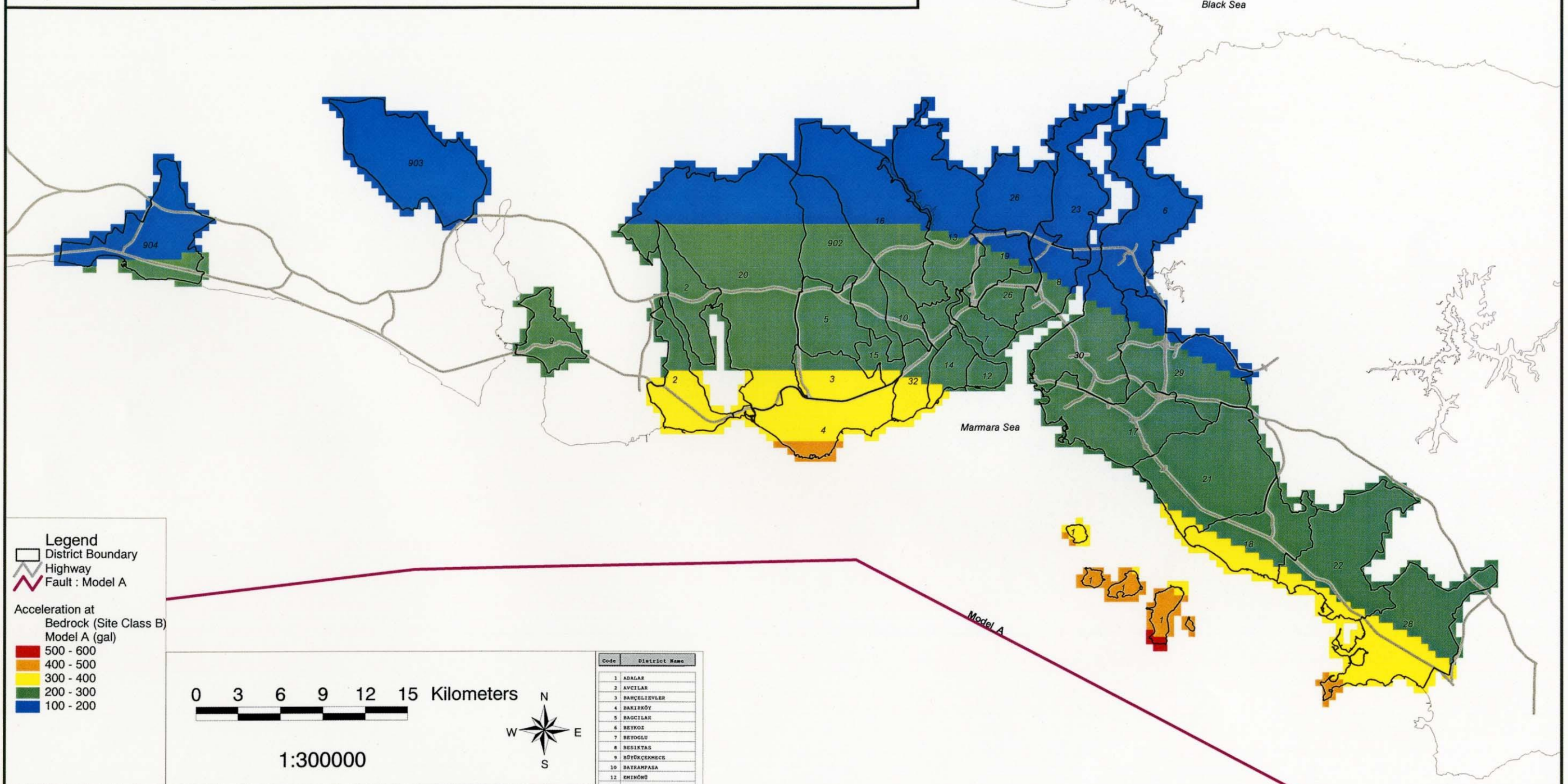
Istanbul Metropolitan Municipality (IMM)
Japan International Cooperation Agency (JICA)



Source : JICA Study Team

Distribution of Acceleration at Bedrock : Model A

Kayazeminde Ivme Daglimi : Model A



Legend

- District Boundary
- Highway
- Fault : Model A

Acceleration at Bedrock (Site Class B) Model A (gal)

- 500 - 600
- 400 - 500
- 300 - 400
- 200 - 300
- 100 - 200

0 3 6 9 12 15 Kilometers

1:300000

Code	District Name
1	ADALAR
2	AVCILAR
3	BAHÇELİEVLER
4	BAKIRKÖY
5	BAGCILAR
6	BEYKOZ
7	BEYOĞLU
8	BESIKTAS
9	BÜYÜKÇEKMECE
10	BAYRAMPAŞA
12	EMİNOĞLU
13	EYÜP
14	FATİH
15	GÜNGÖREN
16	GAZİOSMANPAŞA
17	KADIKÖY
18	KARTAL
19	KAGITÇI
20	KÜÇÜKÇEKMECE
23	MALTEPE
22	PENDEK
23	SARIER
26	SİSİLİ
28	TUZLA
29	ÜMRANİYE
30	OSKODAR
32	ZETTİNBUĞU
902	ESEMLER
903	ÇATALCA
904	SİLİVRİ

THE STUDY ON A DISASTER PREVENTION / MITIGATION BASIC PLAN
IN ISTANBUL INCLUDING SEISMIC MICROZONATION
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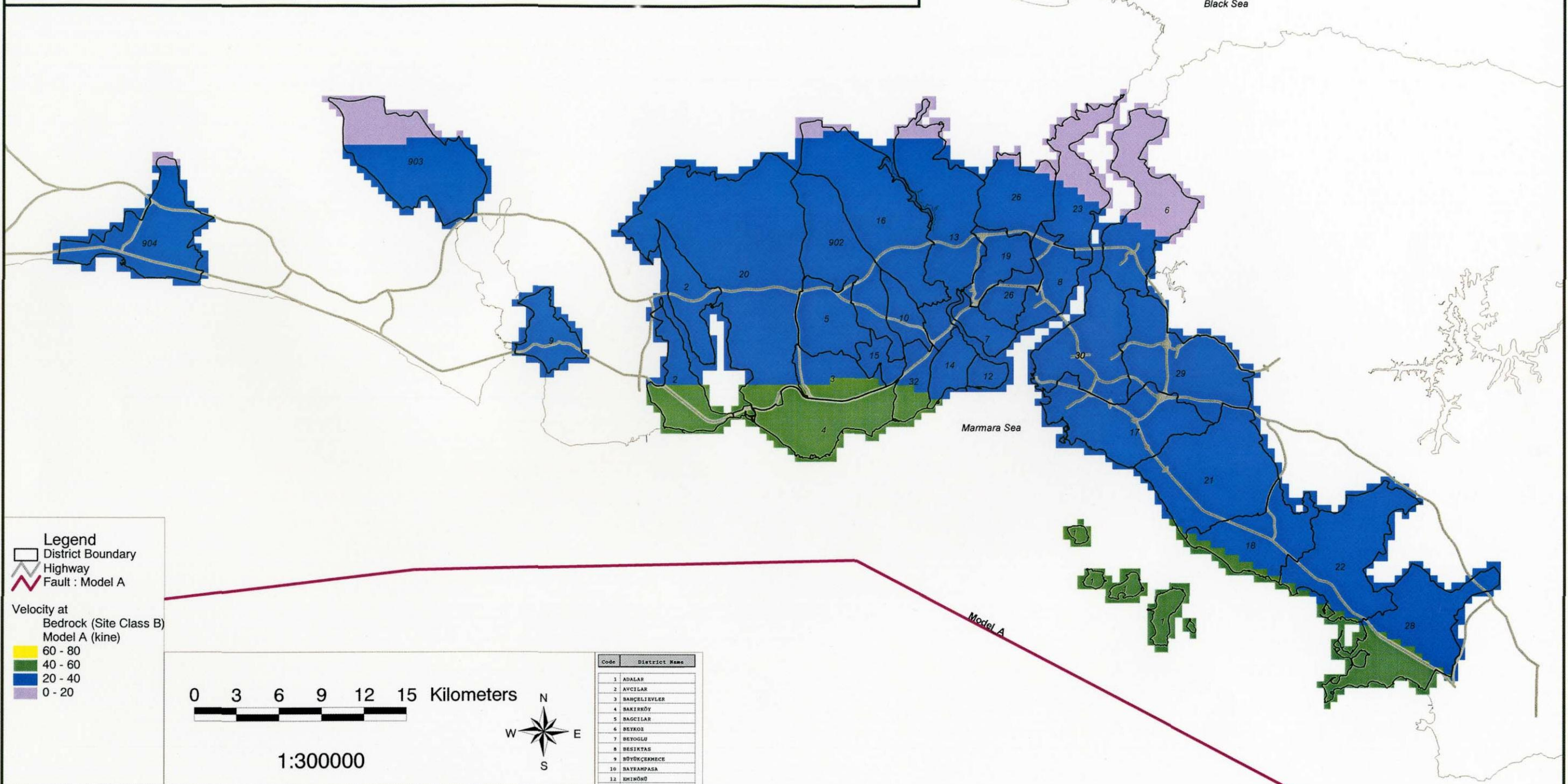
Istanbul Metropolitan Municipality (IMM)
Japan International Cooperation Agency (JICA)



Source : JICA Study Team

Distribution of Velocity at Bedrock : Model A

Kayazeminde Hiz Dagilimi : Model A



Legend

- District Boundary
- Highway
- Fault : Model A

Velocity at Bedrock (Site Class B) Model A (kine)

- 60 - 80
- 40 - 60
- 20 - 40
- 0 - 20

0 3 6 9 12 15 Kilometers

1:300000

Code	District Name
1	ADALAR
2	AVCILAR
3	BAGCILIVLER
4	BAKIRKÖY
5	BAGCILAR
6	BEYKÖZ
7	BEYOĞLU
8	BESİKTAS
9	BÜYÜKÇEKMECE
10	BAVRANPAŞA
11	EMİRHÖNÜ
12	KYÖP
13	FATİH
14	GÜNGÖREN
15	GAZIOSMANPAŞA
16	KADIKÖY
17	KARTAL
18	KAGITHANE
19	KÜÇÜKÇEKMECE
20	MALTEPE
21	PENİİK
22	SARILYER
23	SİSLİ
24	TUZLA
25	ÜNEANITE
26	ÜSKÜDAR
27	SEYİTİNİSİ
28	ESENLER
29	ÇATALCA
30	SİLİVRİ

THE STUDY ON A DISASTER PREVENTION / MITIGATION BASIC PLAN IN ISTANBUL INCLUDING SEISMIC MICROZONATION IN THE REPUBLIC OF TURKEY

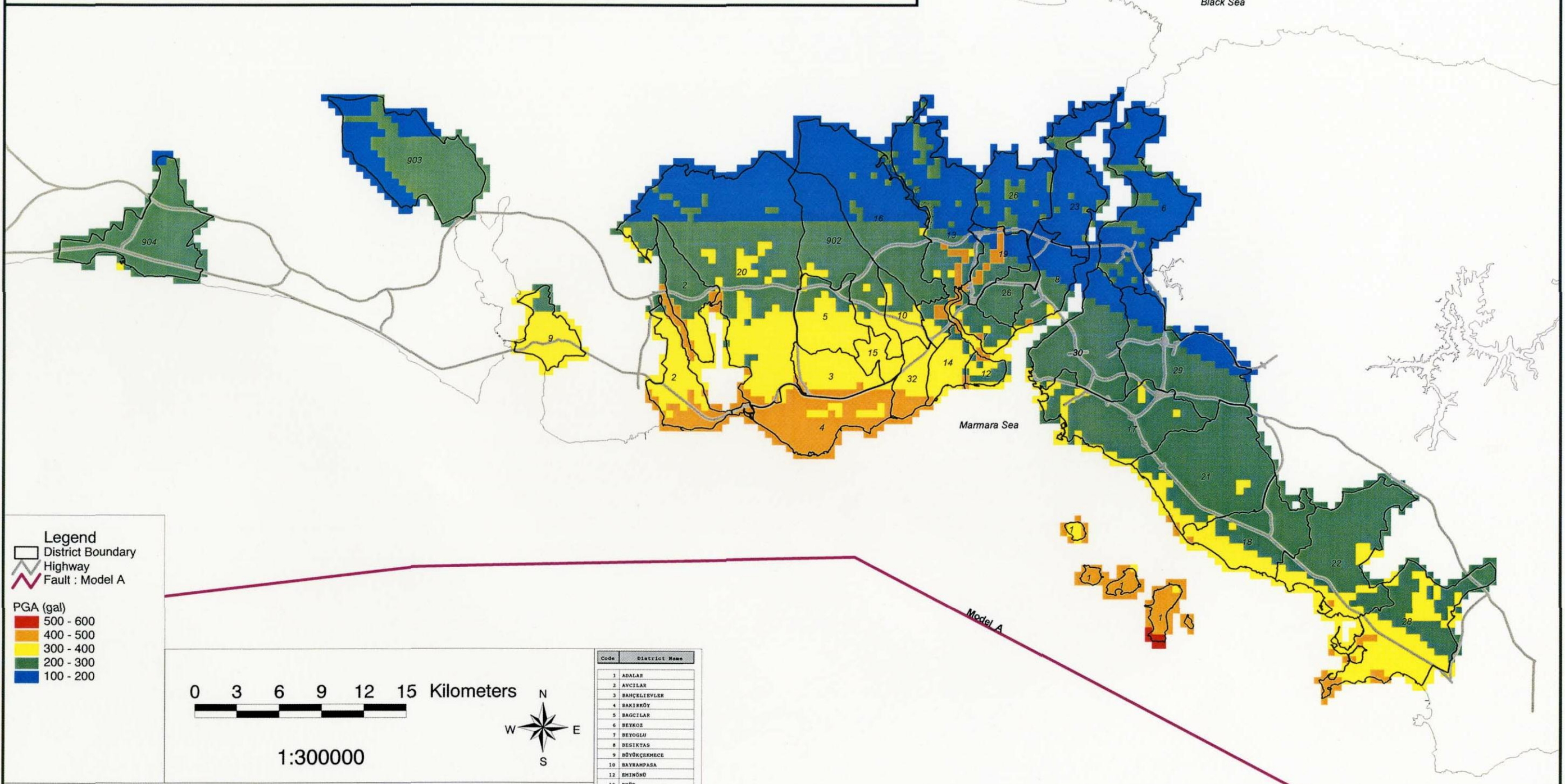
Istanbul Metropolitan Municipality (IMM)
Japan International Cooperation Agency (JICA)



Source : JICA Study Team

Distribution of Peak Ground Acceleration : Model A

En Yüksek Zemin İvmesi Dağılımı : Model A



Legend

- District Boundary
- Highway
- Fault : Model A

PGA (gal)

- 500 - 600
- 400 - 500
- 300 - 400
- 200 - 300
- 100 - 200

0 3 6 9 12 15 Kilometers

1:300000

Code	District Name
1	ADALAR
2	AVCILAR
3	BAĞÇELİEVLER
4	BAKIRKÖY
5	BAGCILAR
6	BEYKÖZ
7	BEYOĞLU
8	BESİKTAS
9	BÜYÜKÇEKİRCE
10	BAYRAMPAŞA
12	EMİNOĞU
13	EYÜP
14	FATİH
15	GÖĞÜSÖREN
16	GAZİOSMANPAŞA
17	KADIKÖY
18	KARTAL
19	KAGITÇI
20	KÜÇÜKÇEKİRCE
21	MALTEPE
22	PENDEK
23	SARIER
26	SİSİ
28	TUZLA
29	ÜMRANİYE
30	ÜSKÜDAR
32	ZETTİNBURNU
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904	SİLİVRİ

THE STUDY ON A DISASTER PREVENTION / MITIGATION BASIC PLAN
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IN THE REPUBLIC OF TURKEY

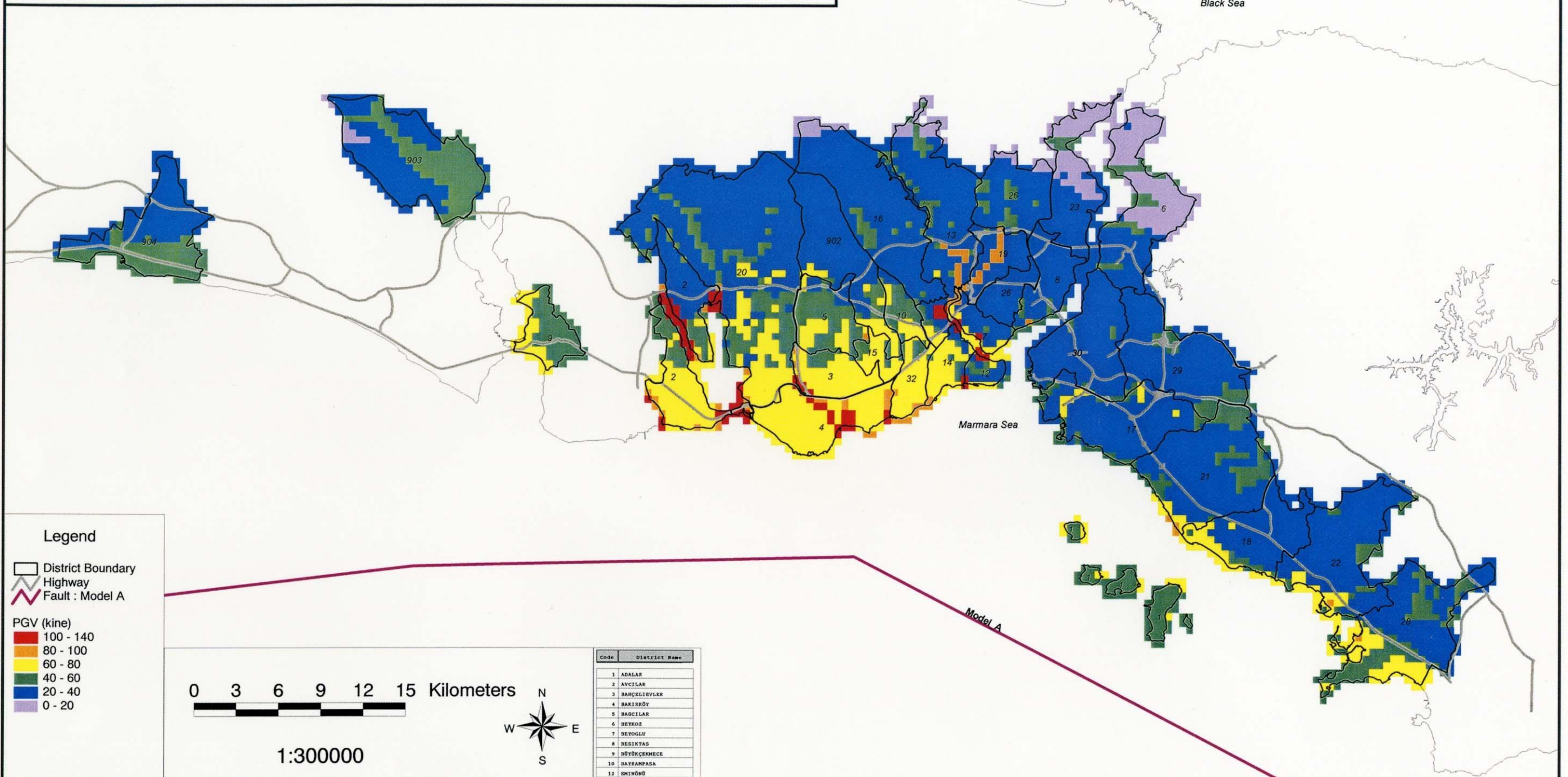
Istanbul Metropolitan Municipality (IMM)
Japan International Cooperation Agency (JICA)



Source : JICA Study Team

Distribution of Peak Ground Velocity : Model A

En Yüksek Zemin Hizi Dağılımı : Model A



Legend

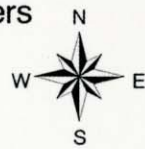
- District Boundary
- Highway
- Fault : Model A

PGV (kine)

- 100 - 140
- 80 - 100
- 60 - 80
- 40 - 60
- 20 - 40
- 0 - 20

0 3 6 9 12 15 Kilometers

1:300000



Code	District Name
1	ADALAR
2	AVCILAR
3	BANÇLIEVLER
4	BAKIRKÖY
5	BAGCILAR
6	BEYKOZ
7	BEYOĞLU
8	BESIKTAS
9	BÜYÜKÇEKMECE
10	BAYRAMPAŞA
12	EMİRHÖNÜ
13	EYÜP
14	FATİH
15	GÜNGÖRER
16	GAZİOSMANPAŞA
17	KADIKÖY
18	KARTAL
19	KAGITHANE
20	KÜÇÜKÇEKMECE
21	HALIÇEPE
22	PENDEK
23	SARIER
26	SİSİLİ
28	TÜSİA
29	ŞİŞLİ
30	ÜSKÜDAR
32	SEYİTLİ
902	ESENLER
903	ÇATALCA
904	SİLİVRİ

THE STUDY ON A DISASTER PREVENTION / MITIGATION BASIC PLAN
IN ISTANBUL INCLUDING SEISMIC MICROZONATION
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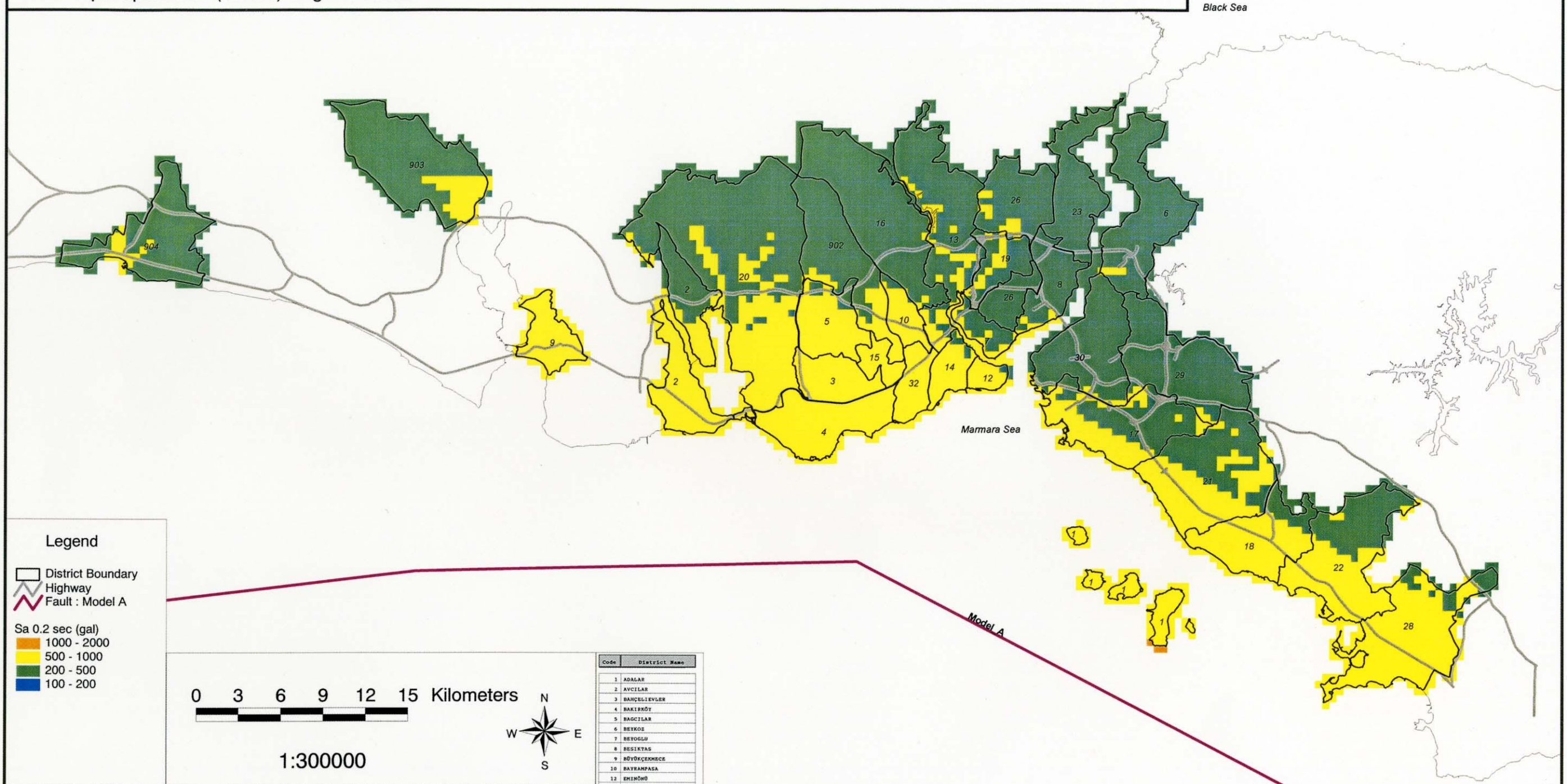
Istanbul Metropolitan Municipality (IMM)
Japan International Cooperation Agency (JICA)



Source : JICA Study Team

Distribution of Acceleration Response Spectrum (0.2 sec) : Model A

İvme Tepki Spektrumu (0.2 sn.) Dağılımı : Model A



Legend

- District Boundary
- Highway
- Fault : Model A

- Sa 0.2 sec (gal)
- 1000 - 2000
 - 500 - 1000
 - 200 - 500
 - 100 - 200

0 3 6 9 12 15 Kilometers

1:300000



Code	District Name
1	ADALAR
2	AVCILAR
3	BANCIKIEVLER
4	BAKIRKÖY
5	BAGCILAR
6	BEKKÖE
7	BEYOGLU
8	BESIKTAS
9	BÜYÜKÇEKMECE
10	BAYRAMPAŞA
11	EMİNOVU
12	EYÜP
13	FATİH
14	GÖĞÜSREN
15	GAZİOSMANPAŞA
16	KADIKÖY
17	KARTAL
18	KAGITHANE
19	KÜÇÜKÇEKMECE
20	MALTEPE
21	FERİK
22	SARIER
23	SİSLİ
24	TUZLA
25	ÖMERANIE
26	ÜSKÜDAR
27	ZEYTİNBURNU
28	ESKİLER
29	ÇATALCA
30	SİLİVRİ

THE STUDY ON A DISASTER PREVENTION / MITIGATION BASIC PLAN
IN ISTANBUL INCLUDING SEISMIC MICROZONATION
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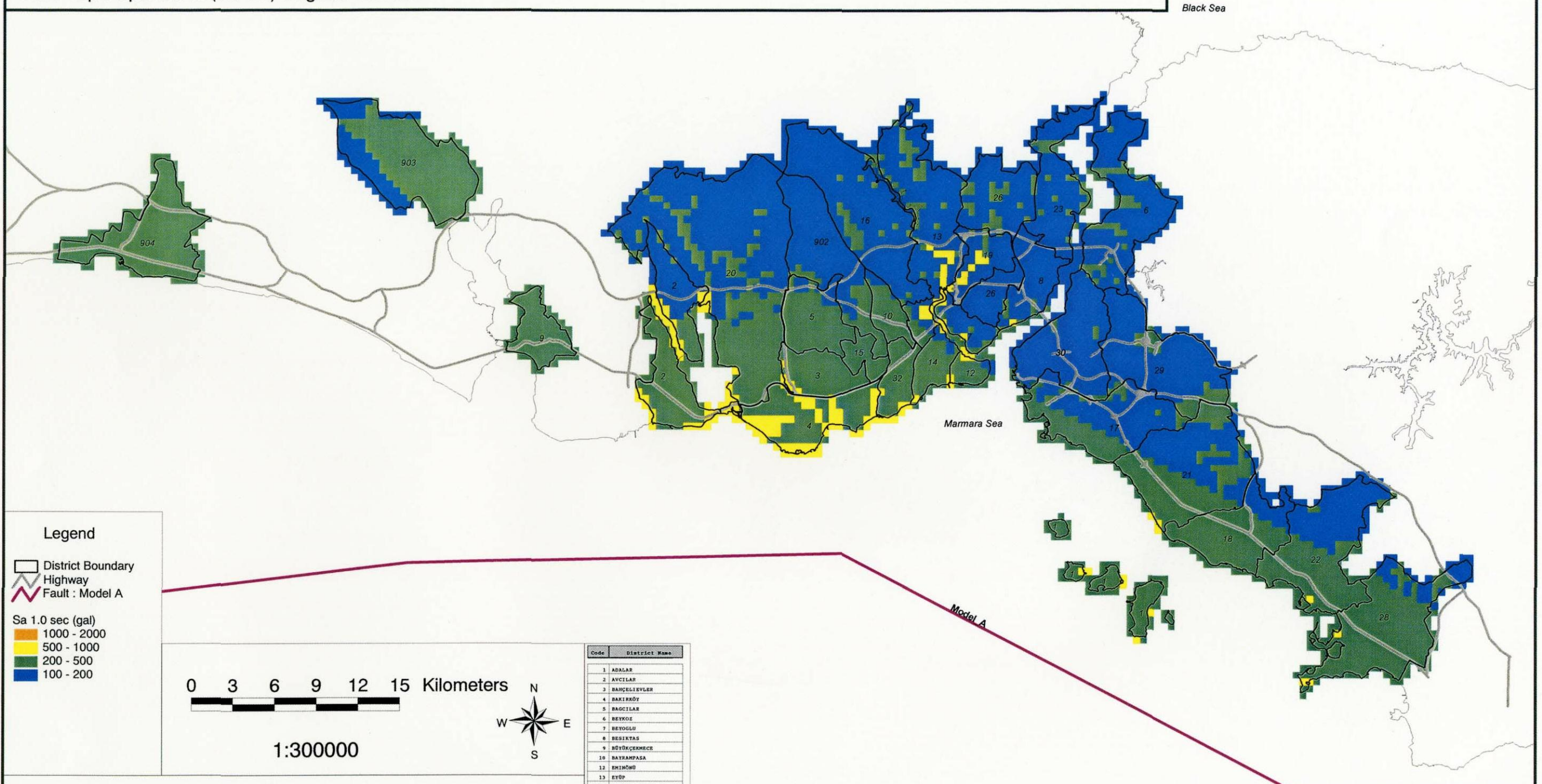
Istanbul Metropolitan Municipality (İMM)
Japan International Cooperation Agency (JICA)



Source : JICA Study Team

Distribution of Acceleration Response Spectrum (1.0 sec) : Model A

Ivme Tepki Spektrumu (1.0 sn.) Dagilimi : Model A



Legend

- District Boundary
- Highway
- Fault : Model A

Sa 1.0 sec (gal)

- 1000 - 2000
- 500 - 1000
- 200 - 500
- 100 - 200

0 3 6 9 12 15 Kilometers

1:300000

Code	District Name
1	ADALAR
2	AVCILAR
3	BAHÇELİEVLER
4	BAKIRKÖY
5	BACILAR
6	BEYOĞLU
7	BESIKTAS
8	BÜYÜKÇEKMECE
9	BAYRAMPAŞA
10	EMİNOĞLU
11	EYÜP
12	FATİH
13	GÜNGÖR
14	KAĞITCI
15	KARTAL
16	KADIKÖY
17	KARTAL
18	KADIKÖY
19	KADIKÖY
20	KADIKÖY
21	KADIKÖY
22	KADIKÖY
23	KADIKÖY
24	KADIKÖY
25	KADIKÖY
26	KADIKÖY
27	KADIKÖY
28	KADIKÖY
29	KADIKÖY
30	KADIKÖY
31	KADIKÖY
32	KADIKÖY
902	ESKİLER
903	ÇATALCA
904	BİLİVRE

THE STUDY ON A DISASTER PREVENTION / MITIGATION BASIC PLAN
IN ISTANBUL INCLUDING SEISMIC MICROZONATION
IN THE REPUBLIC OF TURKEY

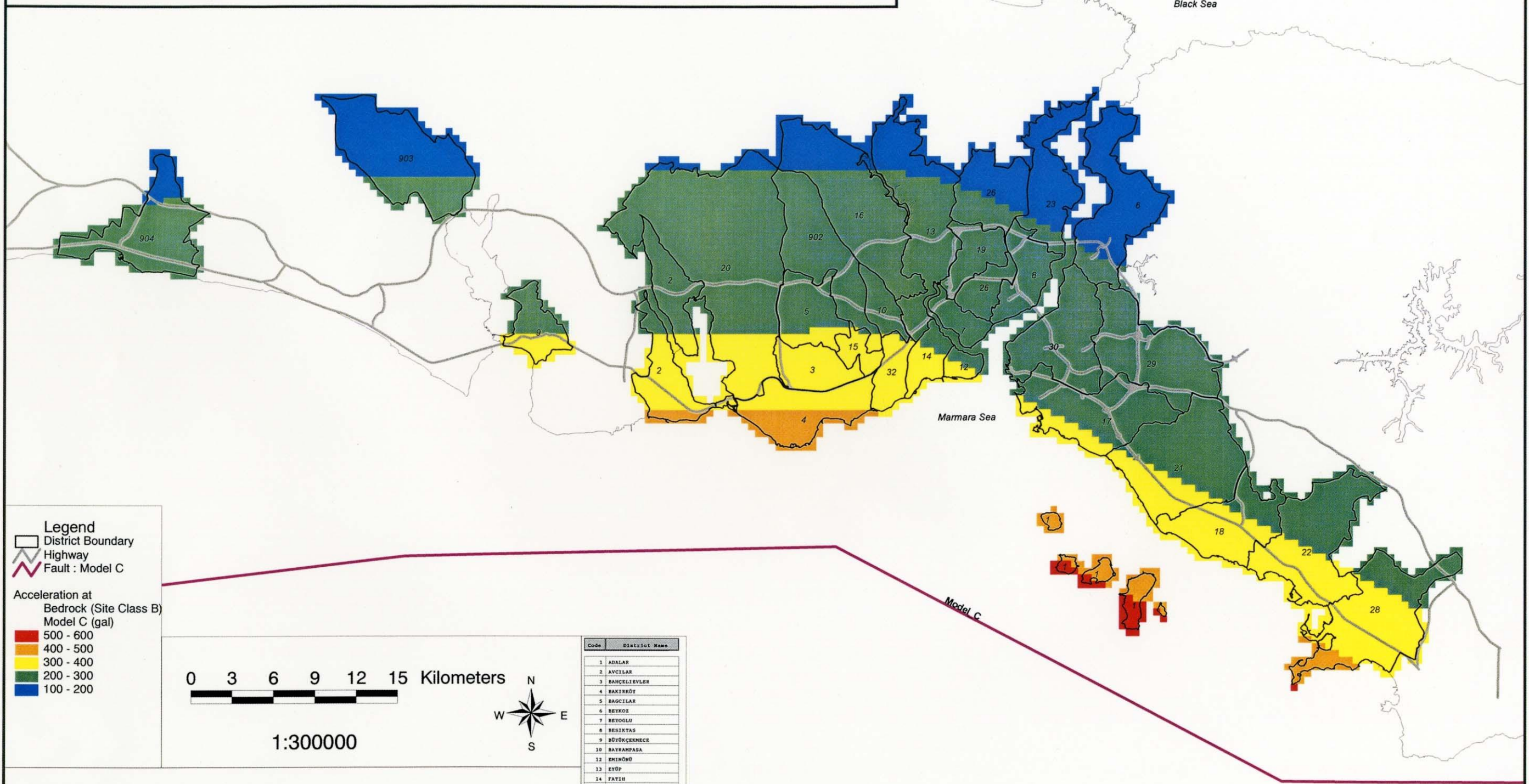
Istanbul Metropolitan Municipality (IMM)
Japan International Cooperation Agency (JICA)



Source : JICA Study Team

Distribution of Acceleration at Bedrock : Model C

Kayazeminde Ivme Dagilimi : Model C



Legend

- District Boundary
- Highway
- Fault : Model C

Acceleration at Bedrock (Site Class B) Model C (gal)

- 500 - 600
- 400 - 500
- 300 - 400
- 200 - 300
- 100 - 200

0 3 6 9 12 15 Kilometers

1:300000

Code	District Name
1	ADALAR
2	AVCILAR
3	BAHÇELİEVLER
4	BAKIRKÖY
5	BAGCILAR
6	BEYOĞLU
7	BEYOĞLU
8	BESIKTAS
9	BÜYÜKÇEKMECE
10	BAYRAMPAŞA
11	EMİNOĞLU
12	EYÜP
13	FATİH
14	FATİH
15	GÜNGÖR
16	GARİBOĞAZI
17	KADIKÖY
18	KARTAL
19	KAGITHANE
20	KÜÇÜKÇEKMECE
21	MALTEPE
22	PENDEK
23	SARIER
24	SİĞİR
25	TUZLA
26	ÜSKÜDAR
27	ÜSKÜDAR
28	ÜSKÜDAR
29	ÜSKÜDAR
30	ÜSKÜDAR
31	ÜSKÜDAR
32	ÜSKÜDAR
901	ESENLER
902	ÇATALCA
903	ÇATALCA
904	SİLİVRİ

THE STUDY ON A DISASTER PREVENTION / MITIGATION BASIC PLAN IN ISTANBUL INCLUDING SEISMIC MICROZONATION IN THE REPUBLIC OF TURKEY

Istanbul Metropolitan Municipality (IMM)
Japan International Cooperation Agency (JICA)



Source : JICA Study Team