

## 序文

地質情報研究部門  
沿岸域プロジェクトリーダー 板木 拓也

産総研地質調査総合センターでは，平成 19 年に発生した能登半島地震と中越沖地震の震源が浅海の沿岸域に位置していたことを重視し，浅海から平野にわたる沿岸域における地質情報の整備を目的とした「沿岸域の地質・活断層調査（沿岸域プロジェクト）」を平成 20 年より開始した．沿岸域は，地震や活断層，津波などによる地質災害の影響が大きい地域であるとともに私たちの生活や産業においても重要な場所と言える．そこで地質調査総合センターでは，沿岸域に分布する活断層や軟弱地盤などによる地質災害リスクの軽減，私たちの生活や産業の基盤となる地盤情報の整備，そして地質調査の技術開発を目的とし，沿岸域に特化した調査・研究を開始した．

沿岸域の地質・活断層調査では，陸域での野外地質調査やボーリング調査，反射法地震探査，海域での音波探査や堆積物調査，海陸にわたっての重力異常や空中磁気の物理探査など，多様な手法を用いることで海域から陸域へのシームレスな地質情報を整備している．これまでに平成 22 年度には能登半島北部沿岸域，平成 23 年度には新潟沿岸域，平成 25 年度には福岡沿岸域，平成 26 年度には石狩低地南部沿岸域，平成 28 年度には駿河湾北部沿岸域の海陸シームレス地質情報集を整備してきた．その後，新たに大都市圏沿岸域における地質・地盤情報の整備として関東平野南部沿岸域の調査・研究を実施し，令和元年度には海陸シームレス地質情報集「房総半島東部沿岸域」，令和 2 年度には「相模湾沿岸域」を公開した．平成 29 年度からは，名古屋市を中心とする中京エリアにおける地質情報整備を目的として，伊勢湾・三河湾沿岸域の調査・研究を開始し，今回，海陸シームレス地質情報集「伊勢湾・三河湾沿岸域」を整備した．

名古屋市を中心とする中京エリアは，人口が集中し，国内有数の工業地帯が立地している国内の経済や産業を支える地域である．このエリアではかつてより大きな地震災害が頻発しており，とくに明治 24 年（1891 年）の濃尾地震，昭和 20 年（1945 年）の三河地震という内陸地震の被害が大きく，内陸活断層が数多く分布している．また，陸域だけでなく，海域の活断層や，将来的に南海トラフ巨大地震の発生も危惧されている．そのため，地質災害の軽減や産業立地のための地質情報の整備が急務である．そこで本調査において，陸域では，伊勢湾西岸の伊勢平野と三河湾北岸の西三河平野において，反射法地震探査データの解析，既存ボーリングデータの収集と層序ボーリング掘削に基づく地下地質構造を解析した．海域においては，活断層の海域延長の可能性を考慮した高分解能音波探査や堆積物調査を実施した．また，伊勢湾中央部に分布する白子―野間断層を挟んで海上ボーリングを実施し，この断層の活動評価を行った．物理探査では，伊勢湾西部海域における海域重力データを収集・解析して，活断層など地質構造との関係を考察した．

海陸シームレス地質情報集「伊勢湾・三河湾沿岸域」には，これらの調査データと解析結果を論文としてとりまとめ，それらに加え既存研究を編纂し，海陸統合地質図，構造図，地球物理図と 20 編の調査・研究成果が納められている．今後，これらの成果は活断層評価，地震動予測をはじめ，地質災害の軽減や環境評価，産業立地などに活用されることを期待する．

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- (5) ボーリング試料を用いた更新世以降の伊勢湾層序と白子―野間断層の活動度推定（天野敦子，田村 亨，大上隆史，佐藤善輝，入月俊明，中島 礼，小松原 琢）
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## 文献引用例

全体の引用例：

産総研地質調査総合センター（2025）海陸シームレス地質情報集「伊勢湾・三河湾沿岸域」．海陸シームレス地質図 S-8，産総研地質調査総合センター．

論文・地図単位の引用例：

佐藤智之（2025）伊勢湾・三河湾沿岸域10万分の1海底地質図説明書．海陸シームレス地質情報集「伊勢湾・三河湾沿岸域」，海陸シームレス地質図 S-8，産総研地質調査総合センター．

## Preface

Itaki Takuya

(Leader of Coastal Geology Project, Research Institute of Geology and Geoinformation)

The Geological Survey of Japan started the "Geology and Active Fault Survey of the Coastal Area" in 2008 to develop geological information on coastal areas from shallow water to plains, emphasizing that the epicenters of the Noto Peninsula and Chuetsu-Oki earthquakes in 2007 were located in the shallow waters of the coastal areas. Coastal areas are highly susceptible to geological hazards such as earthquakes, active faults, and tsunamis, and are also important for our lives and industrial activities. Therefore, the Geological Survey of Japan has started to conduct research and studies specifically on coastal areas to reduce the risk of geological disasters caused by active faults and soft ground distributed in coastal areas, to develop geological information that will serve as the basis for social lives and industries, and to develop geological survey techniques.

In the coastal geological and active fault investigation, seamless geological information from sea area to land area has been developed by multidisciplinary surveys such as field geological survey, borehole survey, seismic reflection survey in land area, seismic reflection survey and surface sediment survey in sea area, gravity anomaly and aeromagnetic geophysical survey from sea to land. We have compiled seamless geoinformation of the coastal zone for the northern coastal zone of Noto Peninsula in FY2010, the coastal zone around Niigata in FY2011, the coastal zone around Fukuoka in FY2013, the southern coastal zone of the Ishikari Depression in FY2014, and the northern coastal zone of Suruga Bay in FY2016. After that, to develop new geological and geotechnical information in the coastal areas of metropolitan areas, we conducted surveys in the southern coastal area of the Kanto Plain, including the eastern part of the Boso Peninsula and Sagami Bay, and then released the seamless geoinformation of the coastal zone "Eastern Coastal Zone of Boso Peninsula" in FY2019 and "Coastal Zone of Sagami Bay" in FY2020. In FY 2017, we started research and surveys in the coastal areas of Ise Bay and Mikawa Bay to develop geological information in the Chukyo area centered on Nagoya City, and in this time, we released the seamless geoinformation of the "Coastal Zone of Ise Bay and Mikawa Bay".

The Chukyo area, centering on Nagoya City, is a region that supports Japan's economy and industry, with a large population concentration and the location of one of the country's leading industrial zones. This area has experienced frequent major earthquake disasters in the past, especially the Nobi Earthquake in 1891 and the Mikawa Earthquake in 1945, and many inland active faults are distributed in this area. In addition, it is concerned about active faults distributed not only in the land area but also in the sea area, and the occurrence of a major earthquake in the Nankai Trough is also expected in the future. Therefore, there is an urgent need to improve geological information for the mitigation of geological hazards and industrial location. In this study, we analyzed the subsurface geological structure of the Ise Plain on the west coast of Ise Bay and the Nishi-Mikawa Plain on the north coast of Mikawa Bay based on the analysis of seismic reflection survey data, collection of existing borehole data, and stratigraphic borehole drilling. In the marine area, high-resolution seismic survey and sedimentary survey were conducted considering the possibility of extension of active faults in the sea area. In addition, offshore borehole drillings were conducted across the Shiroko-Noma Fault, which is distributed in the central part of Ise Bay, to evaluate the activity of this fault. In the geophysical survey, we

collected and analyzed gravity data in the western part of Ise Bay and discussed the relationship with geological structures such as active faults.

In this seamless geoinformation of the “Coastal Zone of Ise Bay and Mikawa Bay”, the results of these investigations and analyses are summarized, and in addition to them, existing studies are compiled into land-sea integrated geological maps and geophysical maps, and 20 papers of investigations and research results are also included. We expect that these results will be utilized for active fault evaluation, earthquake ground motion prediction, geologic hazard mitigation, environmental assessment, industrial location, and so on.

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- (3) On the screening procedures for verification of the presence or absence and estimation of activity of the coastal active structures, by Komatsubara Taku

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- (4) Explanatory notes of 1:100,000 Marine geological map around the coastal zone in Ise Bay and Mikawa Bay, by Sato Tomoyuki
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- (7) Explanation note on the terrestrial geology-Upper Quaternary stratigraphy, reference horizon and late Quaternary structures in the terrestrial area around Ise Bay and Mikawa Bay-, by Komatsubara Taku and Sato Yoshiki
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- (17) Microtremor array survey in and around Nishio City, by Cho Ikuro
- (18) Seismic Reflection Survey in North Mie Prefecture -Subsurface Structure and Continuity of the Chisato Fault -, by Ito Shinobu, Kinoshita Sawako and Yamaguchi Kazuo
- (19) Seismic Reflection Survey at the Fault Blank Area between the Takahama Flexure and the Yokosuka Fault, by Ito Shinobu and Kinoshita Sawako
- (20) Shallow subsurface structure by seismic reflection surveys at the southwest of Nishi-Mikawa Plain, central Japan, by Kinoshita Sawako, Ito Shinobu and Yamaguchi Kazuo

## **Bibliographic Reference**

### **Example of the whole citation**

Geological Survey of Japan, AIST (2025) Seamless Geoinformation of Coastal Zone, “Coastal Zone of Ise Bay and Mikawa Bay”, Seamless Geological Map of Coastal Zone S-8, Geological Survey of Japan, AIST.

### **Example of the citation of individual reports and maps**

Sato, T. (2025) Explanatory notes of 1:100,000 Marine geological map of the coastal zone in Ise Bay and Mikawa Bay. Seamless Geoinformation of Coastal Zone, “Coastal Zone of Ise Bay and Mikawa Bay”, Seamless Geological Map of Coastal Zone S-8, Geological Survey of Japan, AIST.