

**Topic-Setting Program to Advance Cutting-Edge  
Humanities and Social Sciences Research**

(Responding to Real Society)

**Progress Report**  
(Summary of Final Report)

[Modeling and Implementation Study of Effective and Sustainable  
Disaster Tradition]

**Core-Researcher:** Shosuke Sato

**Institution:** Tohoku University

**Academic Unit:** International Research Institute of Disaster Science

**Position:** Associate Professor

**Research Period:** FY2015 – FY2018

## 1. Basic information of research project

Research Area	Interrelationship between institutions, culture, public spirit, and socioeconomic systems
Project Title	Modeling and Implementation Study of Effective and Sustainable Disaster Tradition
Institution	Tohoku University
Core-Researcher (Name, Academic Unit & Position)	Shosuke Sato, International Research Institute of Disaster Science, Associate Professor
Project Period	FY2015 - FY2018
Appropriations Plan (¥)	FY2015 2,760,000 JPY
	FY2016 4,050,000 JPY
	FY2017 3,250,000 JPY
	FY2018 1,200,000 JPY

## 2. Purpose of research

It is important to build the process that consist of contents collecting, structuring, visualization and promotion and the management method to continue user growth based on marketing perspective for effective and sustainable disaster tradition activities. This research project aims to model and implement effective and sustainable disaster tradition methods as action – research and cooperation implementation with practitioners working for disaster tradition at the affected areas in the 2011 Great East Japan Earthquake disaster and researchers specializing in disaster science, library and information science, tourism study, psychology and more research fields.

## 3. Outline of research (Including study member)

This research project aims to design and implement three models to build effective and sustainable disaster tradition method as below.

- 1) Marketing model: To win visitors and users continuously.
- 2) Contents editing model: To collect, to structuring and to visualize disaster records.
- 3) Altered consciousness model: To influence attitude of visitor and user.

### Project members

\* Numbers in each parenthesis is research part model as noted above.

- Core-researcher and research group leader  
Shosuke Sato, Tohoku Univ. (1,2,3))
- Researcher group  
Fumihiko Imamura, Tohoku Univ. (2))  
Shuichi Kawashima, Tohoku Univ. (3))  
Toshiaki Muramoto, Tohoku Univ. (3))  
Yuichi Ebina, Tohoku Univ. (2))  
Anawat Suppasri, Tohoku Univ. (2))  
Maly Elizabeth, Tohoku Univ. (2))

Isao Hayashi, National Museum of Ethnology (2))

Akira Ide, Kanazawa Univ. (1))

● Practitioner group

Masaharu Nakagawa, Ishinomaki Future Support. Association (1, 2)) \*\*group leader

Mariko Yamazaki, Chuetsu Organization for Safe and Secure Society (1, 2))

Kenichi Kurosawa, Ganbaro-Ishinomaki (1, 2))

Takenori Osu, Sanriku Kahoku Shimpō (1, 2))

Mariko Asari, Ishinomaki Future Support. Association (1, 2))

Katsuhiro Abe, Ishinomaki Tourist Association (1))

#### 4. Research results and outcomes produced

This project published 16 peer-review papers, 32 non-peer-review papers, 6 books, presented 27 invited talks, held 3 related symposiums. In these publications, 3 practitioners of members wrote 8 papers through this project as the training of survey and research skills to practitioners. In the project term, we achieved 2 academic prizes and 1 book publishing award. Our research results and outcomes are as below.

##### (1) Marketing model

- I. Dark tourism model for natural disaster affected area based on tourist development method (non peer-review paper 21, 32)
- II. Investigation of potential needs of repeat visitors to disaster tradition facility (peer-review paper 11, non-peer review paper 19, 29)
- III. Analysis factors related conservation or demolition disaster remains (peer-review paper 14, book 2)
- IV. Identification of the requirement of disaster tradition facility and education program (peer-review paper 6, non peer-review paper 8, 17, 31)
- V. Establishment of Way to Summary Count of Visitors for Outdoor Disaster Memorial Site (non peer-review paper 30)
- VI. Establishment of wide-area network organization of tradition practitioners “3.11 Memorial Network” (peer-review paper 3, non peer-review paper 16. 28, book 1)



Fig.1 (1) -V Monitoring result(example) and the system developed at “Ganbaro-Ishinomaki” signboard



Fig. 2 (1) -VI “3.11 Memorial Network”

(2) Contents editing model

- I. Development of personal evacuation behavior archiving method (writing)
- II. Clarification of decision making process for building disaster memorial monument (peer-review paper 4)
- III. Design and implementation of prevention deteriorating and conservation of affected stuffs (writing)
- IV. Application of disaster digital archive to make disaster education materials (peer-review paper 12, book 5, 6)
- V. Development and implementation of disaster remain 3D modeling method (non peer-review paper 18)

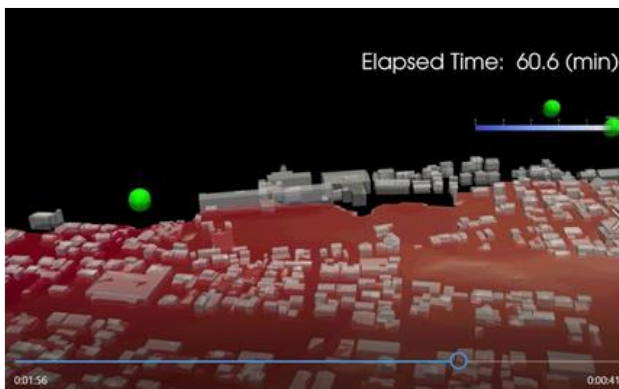


Fig.3 (2) -I Visualization movie of tsunami evacuation behaviors based on interview records with the developed method



Fig.4 (2) -III Fumigation of “first” “Ganbaro-Ishinomaki” signboard



Fig.5 (2) -V 3D model of disaster remain and VR of in the building

(3) Altered consciousness model

- I. Quantitative evaluation of damage reduction caused by disaster tradition of before the 2011 Great Japan Earthquake disaster (peer-review paper 1, 2, 5, 8, 9, 13, 16, non peer-review paper 3, 7, 9, 11, 12, 13, 15, 20, 22, 25, book 3, 4)
- II. Clarifying a current situation of disaster memory of 50 years ago (peer-review paper 15)
- III. Psychology experiment of effect to consciousness caused by listening survivor's experiences telling (writing, non peer-review paper 23, 24)
- IV. User evaluation experiment of ICT tools to support disaster tradition activity (non peer-review paper 26)
- V. Investigating tsunami evacuation behavior of "the next tsunami event" in the affected in the 2011 Great East Japan Earthquake disaster (peer-review paper 7, 10, non peer-review paper 12, 13)
- VI. Investigation of "disaster memory" of children in the affected in the 2011 Great East Japan Earthquake disaster (non peer-review paper 14, 27)

Table 1 (3) -I logistic regression model of tsunami evacuation (Rikuzentakata city)

	ステップワイズ法				
	B	標準誤差	Wald	有意確率	Exp(B)
定数	-0.907	0.334	7.364	0.007	0.404
事前避難場所決定 (自分) ダミー					
事前避難場所決定 (家族) ダミー					
ハザードマップ認知ダミー					
家族で防災を話し合う頻度ダミー*	0.700	0.338	4.284	0.038	2.015
近所で防災を話し合うダミー					
防災関連組織所属ダミー					
地域防災訓練概ね参加ダミー					
地震津波リスク認知ダミー					
地区津波リスク認知ダミー					
自宅津波リスク認知ダミー					
昭和三陸津波認識ダミー**	0.962	0.354	7.393	0.007	2.618
明治三陸津波認識ダミー					
津波碑認知ダミー					



Fig.6 (3) -III Psychology experiment of effect by listening survivor's experiences telling



Fig. 7 (3) -IV ICT tools to support disaster tradition activity

In this research project, it was scientifically found that disaster tradition activities influence disaster reduction, and findings of sustainable management gained. So, the implementation confirmed that visitors of the facility and users of the education program in “B” organization intervened were increased (Fig. 8).

Then, the core researcher was designated official advisers of many local government in affected areas in the project term. (Ishinomaki City: facilitator of disaster tradition committee, facilitator of disaster remain planning committee (Kadonowaki elementary school), facilitator of disaster remain planning committee (Okawa elementary school), Advisor of disaster tradition, selection board member of design operation proposal (Kadonowaki and Okawa) , Higashimatsushima City: advisor of disaster tradition center, advisor of disaster monument design, Kesenuma City: advisory committee member of disaster tradition center, Shiogama City: Advisor of tsunami disaster reduction center, Tagajo City: advisor of disaster education team, Sendai City: advisory member coastal memorial facilities, Natori City: disaster tradition center, Other: “3.11 Memorial Network” special advisor)

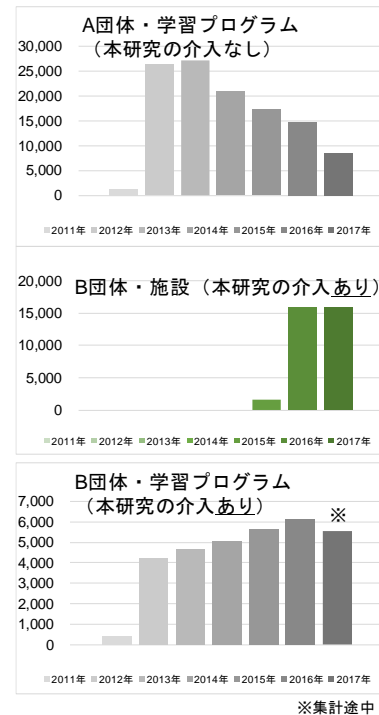


Fig. 8 Result of implementation: trend of visitors and users (B is intervened)

【Research Product】

(1) Papers \* 16 peer-review papers and 32 non peer-review papers

【Peer-review paper】

1. Shosuke Sato, Fumihiko Imamura : Could We Share and Make Use of Response Experience in Past Disasters?: Suggestions and Proposal Based on Results from Qualitative Survey on Responders in Miyagi Prefecture Government in the 2011 Great East Japan Earthquake Disaster, Journal of social safety science, No.33, pp. 105-114, 2018.11.
2. Shosuke Sato, Anna Shinka, Shuichi Kawashima, Fumihiko Imamura : INTERREGIONAL COMPARATIVE EVALUATION OF AWARENESS OF PAST TSUNAMI EVENTS JUST BEFORE THE 2011 EAST GREAT EARTHQUAKE DISASTER OCCURRING, Journal of JSCE B2 Ser., Vol.74, No. 2, I\_505-I\_510, 2018.11.
3. Shosuke Sato, Fumihiko Imamura : Case Study of the Dialogue Processes on Three Planning Committees Related to Disaster Tradition and Remains Ground Plans in Ishinomaki City: The Verification of Effectiveness of the Committee Design and Practical Considerations,

- Journal of Japan Society for Natural Disaster Science, Vol. 37, pp. 47–72, 2018.10.
4. Shosuke Sato: The Decision Making Process for Building Memorial Monument Related to the 2011 Great East Japan Earthquake Disaster in Higashimatsushima City, Miyagi Prefecture, Journal of Disaster Recovery and Revitalization, No. 12, pp. 12–19, 2018. 7.
  5. Shosuke Sato, Yuta Hirakawa, Anna Shinka, Fumihiko Imamura: Did Disaster Tradition Activities Promote Tsunami Evacuation Behavior? : Case Study Using Questionnaire Survey in Rikuzentakata City, Iwate Prefecture, Journal of social safety science, No.31, pp. 69–76, 2017. 11.
  6. Mariko Asari, Masaharu Nakagawa, Shosuke Sato: Current Analysis of Disaster Education Program in Miyagi Prefecture : Characteristics of Disaster Tradition for 6 Years after Occurrence of the 2011 Great East Japan Earthquake and Tsunami Disaster, Journal of social safety science, No.31, pp. 77–85, 2017.11.
  7. Shosuke Sato, Fumihiko Imamura, Kazuhiro Aizawa, Kenta Yokoyama, Katsuharu Sato, Masahiro Iwasaki, Mitsuhiro Minakawa, Naoki Togawa: EVACUATION BEHAVIOR CAUSED BY THE 2016 FUKUSHIMA EARTHQUAKE AND TSUNAMI IN ISHINOMAKU CITY, MIYAGI PREFECTURE, Journal of JSCE B2 Ser., Vol.73, I\_1603–I\_1608, 2017.10.
  8. Shosuke Sato, Yuta Hirakawa, Katsumi Shirahata, Fumihiko Imamura: AWARENESS AND RECOGNITION FOR TSUNAMI MONUMENT BUILT BEFORE THE 2011 GREAT JAPAN EARTHQUAKE AND TSUNAMI DISASTER IN RIKUZENTAKATA CITY, IWATE PREFECTURE, Journal of JSCE B2 Ser., Vol.73, I\_1537–I\_1542, 2017.10.
  9. Shosuke Sato, Yuta Hirakawa, Makoto Okumura, Fumihiko Imamura: STATISTICAL ANALYSIS FOR EFFECTIVENESS OF CASUALTY REDUCTION DUE TO TSUNAMI TRADITION MEDIA: FOCUS ON TSUNAMI MOMUMENTS AND PLACE NAMES STEMMING FROM TSUNAMI DISASTERS IN AFFECTED AREAS OF THE 2011 GREAT EAST JAPAN EARTHQUAKE AND TSUNAMI DISASTER, Journal of JSCE B2 Ser., Vol.73, I\_1525–I\_11530, 2017.10.
  10. Naoki Togawa, Shosuke Sato, Fumihiko Imamura, Masahiro Iwasaki, Mitsuhiro Minakawa, Katsuharu Sato, Kazuhiro Aizawa, Kenta Yokoyama : EFFECTIVENESS OF TSUNAMI EVACUATION DRILL FOR REAL EVACUATION BEHAVIOR – THE CASE OF 2016.11.22 FUKUSHIMA TSUNAMI IN CITY OF ISHINOMAKI, MIYAGI PREFECTURE –, Journal of JSCE B2 Ser., Vol.73, I\_1531–I\_1536, 2017.10.
  11. Mariko Yamazaki, Shosuke Sato, Michimasa Yamaguchi, Maly Elizabeth: Explorative Analysis of Critical Requirements of Disaster Memorial Facilities – Based on a Qualitative Survey of Repeat Visitors to the Kogomo Memorial Park –, Journal of Japan Society for Natural Disaster Science・特別号, Vol.36, pp. 41–52, 2017.9.
  12. Shosuke Sato, Fumihiko Imamura: An Analysis on Production Process of Disaster Education Material in a Disaster Affected Area Using Disaster Digital Archive : Participant Observation and Interview Survey on Making Process of Supplementary Reading Material for Disaster Education in Tagajo City, Journal of disaster information studies, No. 15, pp. 41–51, 2017.
  13. Yuta Hirakawa, Shosuke Sato, Katsumi Shirahata, Fumihiko Imamura: CONSIDERATION OF RELATIONSHIP BETWEEN TSUNAMI MONUMENTS, TSUNAMI INUNDATION AREA, AND HUMAN CASUALTY – Case of the Coastal Area of Iwate Prefecture –, Journal of JSCE B2 Ser., Vol.72, I\_1621–I\_1626, 2016.10.
  14. Shosuke Sato, Fumihiko Imamura: Quantitative Analysis Situation of Disaster Remains in the Affected Area of the 2011 Great East Japan Earthquake and Tsunami Disaster — Content Analysis with Text Data on News Articles for 5 Years after the Disaster —, Journal of Disaster Recovery and Revitalization, No.9, pp. 11–19, 2016.7.
  15. Shosuke Sato: “Disaster Memory” of 50 Years Ago and a Disaster Education Program – A School Visit on the Main Theme of the 1964 Niigata Earthquake for Primary School Students –, Journal of Japan Society for Natural Disaster Science, Vol. 35, No. 1, pp.29–33, 2016.6.
  16. Yuta Hirakawa, Shosuke Sato, Nanahiro Kashima, Fumihiko Imamura: Classification of Place Names Stemming from Past Tsunami Disasters and their Spatial Distribution : Focus on Areas Affected by the Great East Japan Earthquake Disaster, Journal of disaster information studies, No. 14, pp.128–139, 2016.6.

【Non peer-review paper】

1. Anna Shinka, Shosuke Sato, Fumihiko Imamura : A Comparative Analysis of Tsunami Evacuation Behavior Targeting on Rikuzentakata City and Kesennnuma City, Proceedings of the annual conference of the Institute of Social Safety Science, No. 43, pp. 119-122, 2018.11.
2. Shosuke Sato, Shuichi Kawashima, Fumihiko Imamura : A Comparative Study on Selecting Processes of Disaster Remains Affected by the 2011 Great East Japan Earthquake and Tsunami Disaster – Cases of Sendai and Kesennnuma Cities, Miyagi Prefecture –, Proceedings of JSDRR Annual Conference - 2018/Tokyo, pp. 8-9, 2018.10.
3. Anna Shinka, Shosuke Sato, Fumihiko Imamura : A Comparative Analysis of Tsunami Evacuation in Two Rias Coastal Areas - Case of Rikuzentakata City and Kesennnuma City –, 37th Proceedings of JSNDS Annual Conference, pp. 97-98, 2018.10.
4. Hiroto Onodera, Shosuke Sato : Consideration of Disaster Education Presentation in Hashikami Elementary School, 37th Proceedings of JSNDS Annual Conference, pp. 101-102, 2018.10.
5. Shun Miura, Sadashi Sugawara, Shinya Kaminagane, Hiroto Onodera, Shosuke Sato : Tsunami Behavior Survey Conducted by Junior High School Students: Case of Hashikami Area in the 2016 Fukushima Earthquake and Tsunami, 37th Proceedings of JSNDS Annual Conference, pp. 175-176, 2018.10.
6. Shosuke Sato, Shuichi Kawashima, Fumihiko Imamura : The Establishing Process of Disaster Remains Affected by the 2011 Great East Japan Earthquake and Tsunami Disaster in Kesennnuma City, Papers of Workshop of the Great East Japan Earthquake, ISSS, No. 7, pp.81-86, 2018.7.
7. Anna Shinka, Shosuke Sato, Shuichi Kawashima, Fumihiko Imamura : Situation and the effect of tsunami tradition in the case of Rikuzentakata city and Kesennnuma city, Papers of Workshop of the Great East Japan Earthquake, ISSS, No. 7, pp.87-90, 2018.7.
8. Mariko Asari, Shosuke Sato : The Study for Discussion Combining Soft and Hard Disaster Memorial Practices through the Cases of Change in Disaster Education Programs at the Minamihama- Kadonowaki District, Ishinomaki City, Papers of Workshop of the Great East Japan Earthquake, ISSS, No. 7, pp. 91-94, 2018.7.
9. Shosuke Sato : A Theoretical Study on Sharing and Tradition of Disaster Experience Knowledge: Focus on “Telling Story of Experience” , Proceedings of the annual conference of the Institute of Social Safety Science, No. 42, pp. 165-168, 2018.5.
10. Mariko Yamazaki, Shosuke Sato, Katsuo Matsumoto, Masayuki Akatsuka, Yuto Hosogai, Keiko Wada : Roles and Possibilities of Disaster Memorial Facilities Observed in Activities of the Junior Supporters Club in Ojiya Earthquake Disaster Museum, Proceedings of the annual conference of the Institute of Social Safety Science, No. 42, pp. 175-178, 2018.5.
11. Anna Shinka, Shosuke Sato, Shuichi Kawashima, Fumihiko Imamura : Situation of Disaster Tradition of Past Tsunami Event in Kesennnuma, Proceedings of JSCE Tohoku Conference Proceedings of JSCE Tohoku Conference, 2017.3.
12. Naoki Togawa, Shosuke Sato, Fumihiko Imamura, Tadanori Endo, Masahiro Iwasaki, Mitsuhiro Minakawa : Evacuation Behavior Caused by the 2016 Fukushima Earthquake and Tsunami in Watari Town, Miyagi Prefecture – Relationship with Experience of the Great East Japan Earthquake and Tsunami Evacuation Drill –, Proceedings of the annual conference of the Institute of Social Safety Science, No. 41, pp. 177-180, 2017.11. ☒Best Presentation Award
13. Shosuke Sato, Kazuhiro Aizawa, Kenta Yokoyama, Katsuharu Sato, Tadanori Endo, Daisuke Takahashi, Masahiro Iwasaki, Mitsuhiro Minakawa, Naoki Togawa, Fumihiko Imamura : Evacuation Behavior Caused by the 2016 Fukushima Earthquake and Tsunami : Survey on Ishinomaki City and Watari Town, 36th Proceedings of JSNDS Annual Conference, pp. 13-14, 2017.9.
14. Hiroto Onodera, Shosuke Sato : Implementation of Disaster Education collaborate in Hashikami Junior High School, 36th Proceedings of JSNDS Annual Conference, pp. 27-28, 2017.9. ☒Best Presentation Award
15. Anna Shinka, Shosuke Sato, Ittetsu Oshikiri, Fumihiko Imamura : Current Situation and User Needs of Higashimatsushima City Disaster Tradition Center, 36th Proceedings of JSNDS



- Annual Conference, pp. 23–24, 2017. 9.
16. Shosuke Sato : Developing Processes of Three Ground Plans Related Disaster Tradition in Ishinomaki City, Papers of Workshop of the Great East Japan Earthquake, ISSS, No.6, pp. 53–58, 2017. 8.
  17. Mariko Asari, Masaharu Nakagawa, Shosuke Sato : Current Analysis of Disaster Memorial Projects and Disaster Education Programs in 8 Municipalities, Papers of Workshop of the Great East Japan Earthquake, ISSS, No.6, pp. 39–44, 2017. 8.
  18. Masaharu Nakagawa, Kenichi Kurosawa, Shosuke Sato : Creation Methods of Disaster Education Contents Utilizing Information Communication Technology, Papers of Workshop of the Great East Japan Earthquake, ISSS, No.6, pp. 49–52, 2017. 8.
  19. Mariko Yamazaki, Shosuke Sato, Toshimichi Yamaguchi, Katsuo Matsumoto : Six Years of Challenges on Operating CHU–ETSU Earthquake Memorial Corridor, Papers of Workshop of the Great East Japan Earthquake, ISSS, No.6, pp. 45–48, 2017. 8.
  20. Shosuke Sato, Fumihiko Imamura : An Exploratory Survey on Affected Areas with “No–Victim” in the Case of the 2011 Great East Japan Earthquake and Tsunami Disaster, Proceedings of the annual conference of the Institute of Social Safety Science, No. 40, pp.181–182, 2017. 6.
  21. Akira Ide, Shosuke Sato : Recovery from Natural Disaster and Pokemon GO, Proceedings of the annual conference of the Institute of Social Safety Science, No. 40, pp.105–106, 2017. 6.
  22. Yuta Hirakawa, Shosuke Sato, Fumihiko Imamura : Fundamental Research of Study of Awareness of the Presence of Tsunami Monument –Case of Rikuzentakata City –, Proceedings of JSCE Tohoku Conference, 2017. 3.
  23. Shosuke Sato : Analysis of Letter from Users of Field Guide, Tsunami Engineering Report, Vol.33, pp.83–87, 2017. 1.
  24. Shosuke Sato : Analysis of on the Survivors’ Behavior Recorded in the 2011 Great East Japan Earthquake Disaster, Tsunami Engineering Report, Vol.33, pp.89–93, 2017. 1.
  25. Yuta Hirakawa, Shosuke Sato, Shuichi Kawashima, Fumihiko Imamura : Actual Condition and Effectiveness of Memorial Services Conducted in front of Tsunami Monuments, Proceedings of the annual conference of the Institute of Social Safety Science, No. 39, pp. 125–128, 2016. 11
  26. Shosuke Sato, Fumihiko Imamura, Masaharu Nakagawa : User Evaluation of ICT Tools for Disaster Tradition, Proceedings of Japan Disaster Information Studies, pp. 214–215, 2016. 10.
  27. Shosuke Sato : Current Analysis of Children’ s “Disaster Memory” of the 2011 East Great Japan Earthquake in Higashimatsushima City, 35th Proceedings of JSNDS Annual Conference, pp. 125–126, 2016. 9. ※Best Presentation Award
  28. Shosuke Sato, Masaharu Nakagawa, Mariko Asari, Fumihiko Imamura : Learning Workshop on Disaster Tradition from Exciting Projects and Problems in Ishinomaki City, Higashimatsushima City and Onagawa Town: Conferences on “Organization for Collaboration on Disaster Learning Business” , Papers of Workshop of the Great East Japan Earthquake, ISSS, No.5, pp.15–18, 2016. 8.
  29. Mariko Yamazaki, Toshimichi Yamaguchi, Shosuke Sato : Primary survey about external communication base the newly born in the wake of the earthquake - case of Yamakoshi Kogomo village –, Papers of Workshop of the Great East Japan Earthquake, ISSS, No.5, pp.91–94, 2016. 8.
  30. Masaharu Nakagawa, Kenichi Kurosawa, Shosuke Sato : Establishment of Way to Summary Count of Visitors for Outdoor Memorial Site, and Survey to Discover the Numbers of Visitors for Outdoor and Indoor Disaster Memorial Site in Ishinomaki, Papers of Workshop of the Great East Japan Earthquake, ISSS, No.5, pp.7–10, 2016. 8.
  31. Mariko Asari, Masaharu Nakagawa, Chihiro Fujima, Shosuke Sato : The Condition and Outlook of Disaster Education Programs at the Coastal Area of Miyagi Prefecture after the 2011 Great East Japan Earthquake Disaster, Papers of Workshop of the Great East Japan Earthquake, ISSS, No.5, pp.1–7, 2016. 8.

32. Akira Ide, Shosuke Sato : Dark Tourism for Natural Disaster Education, Proceedings of the annual conference of the Institute of Social Safety Science, No. 38, pp. 135–136, 2016. 6.

(2) Books \*6 books,

1. 7 Years form the Great East Japan Earthquake Disaster “Life Recovery Learned from case study” , Shosuke Sato et al. , Reconstruction Agency, 2018, 12pp.
2. Current Situation of Disaster Remains in the 2011 Great East Japan Disaster (SHINSAI-GAKU, Vol.11), Shosuke Sato, Tohoku Gakuin University, 2017, 16pp.
3. Disaster Reduction by Tsunami Monument (Earthquake Journal, Vol. 63), Shosuke Sato, Association for the development of earthquake prediction, 2017, 5pp.
4. Disaster and its Reduction –Vol. 2 Version Tsunami), Shosuke Sato, Teikoku-Shoin, 2017, 4pp. , ※School Book Publication Award
5. Use of Disaster Digital Archive ( Journal of Information Processing and Management, Vol.59, No.10) , Shosuke Sato, 2017, 5pp.
6. 5 Years of Disaster Digital Archive (Monthly IM, March, 2016) , Shosuke Sato, 2016, 4pp.