

Consumer as source of marine litter: eye tracking research in different Baltic sea coastal areas

© Indre Razbadauskaite Venske, Inga Dailidienė, Remigijus Dailidė, Toma Dabuleviciene, Vitalijus Kondrat, Egle Baltranaite.

ALL RIGHTS RESERVED

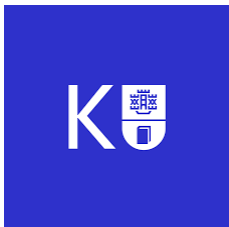
Climate and other drivers of change: Interlinkages, ramifications and impacts in coastal regions

Indre Razbadauskaite Venske,

Inga Dailidienė, Remigijus Dailidė, Toma Dabuleviciene, Vitalijus Kondrat, Egle Baltranaite

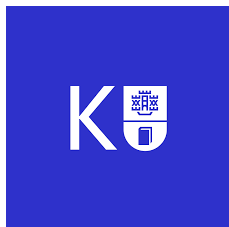
indre.razbadauskaite@gmail.com

2020.05.07 EGU



Literature review: Eye tracker + Marine litter

- Visual attention (R. Santos, J. Oliveira, J. Rocha & J. Giraldi, 2015)
- Visual pathways (A. T. Duchowski, 2017)
- Video based corneal reflection + center of pupil (imotions.com)
- Eye tracker metrics (Gaze point; Fixations; Areas of Interest) (imotions.com)
- Eye tracking is used across a range of different research fields (A. T. Duchowski, 2017)
- Distribution of litter types in different realms (1,034 publications) – MAP (Tekman, M.B., Gutow, L., Macario, A., Haas, A., Walter, A., Bergmann, M.: Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research)
- “Litter in the oceans and seas is not only an aesthetic problem, but also can have severe impacts on marine organisms and habitats” (Helcom, 2014)



© Indre Razbadauskaite Venske,
Inga Dailidiene, Remigijus Dailide, Toma Dabuleviciene, Vitalijus Kondrat, Egle Baltranaite
Indre.razbadauskaite@gmail.com
2020.05.07 EGU

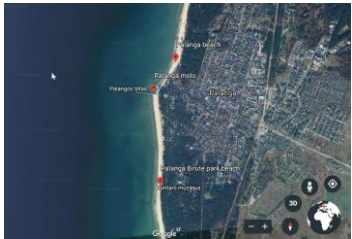
ALL RIGHTS RESERVED



Research problem and objectives



Source: dw.com;



Palanga (pilot test)

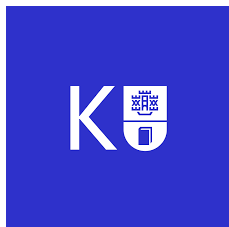


Problem: 48% of marine litter are caused from household-related waste (UN Environment, 2017; Helcom, 2018ad; Micro-and macro-plastics in marine species from Nordic waters).

Objectives: 1. Identify marine anthropogenic litter types and sources in investigated areas; 2. Identify visual beach components and where respondents are looking at; 3. Find out awareness-raising activities among consumers that minimize marine litter and prevent waste generation behavior.

Research area: South Eastern Baltic Sea and the Curonian Lagoon, (Palanga (pilot test); Klaipeda; Smiltyne).

Methodology: Quantitative – (few methods: marine litter monitoring; eye tracker + survey). Qualitative – semi-structured in-depth interviews.



© Indre Razbadauskaite Venske,
Inga Dailidienė, Remigijus Dailidė, Toma Dabulevičienė, Vitalijus Kondrat, Eglė Baltranaite
Indre.razbadauskaite@gmail.com

2020.05.07 EGU

ALL RIGHTS RESERVED

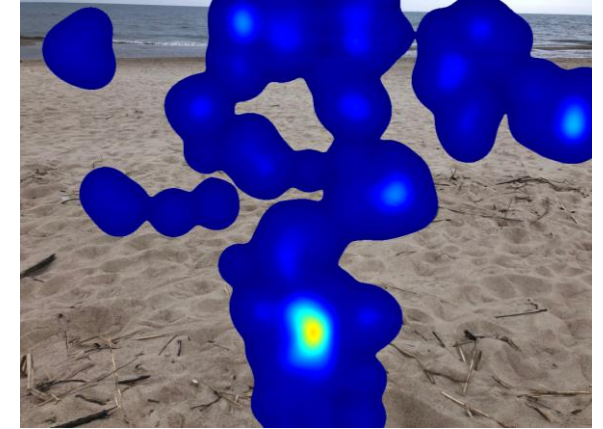


Current process (2019 spring-2020 spring):

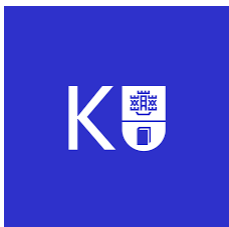
- Methodology development (combining interdisciplinary areas);
- Eye tracking research;
- Marine litter monitoring (beach face and back shore; mainly macro (above 2.5 cm) marine litter classification (for ex., date; code; brand; likelihood of the source).

Further research + steps:

- Continuous research process with screen-based eye tracker + eye tracking glasses (on the site);
- Qualitative research (semi structured interviews);
- “How climate change affects distribution of marine litter” (marine litter tracking possibilities);
- Challenges: distinguish the type of litter which was “brought” by the consumer to the beach;
- COVID-19 effect on plastic consumption;
- Awareness: raising activities + consumer behavioral models.



Eye tracking (pilot test)



© Indre Razbadauskaite Venske,
Inga Dailidiene, Remigijus Dailide, Toma Dabuleviciene, Vitalijus Kondrat, Egle Baltranaite
Indre.razbadauskaite@gmail.com

2020.05.07 EGU

ALL RIGHTS RESERVED





Smiltyne beach 2020

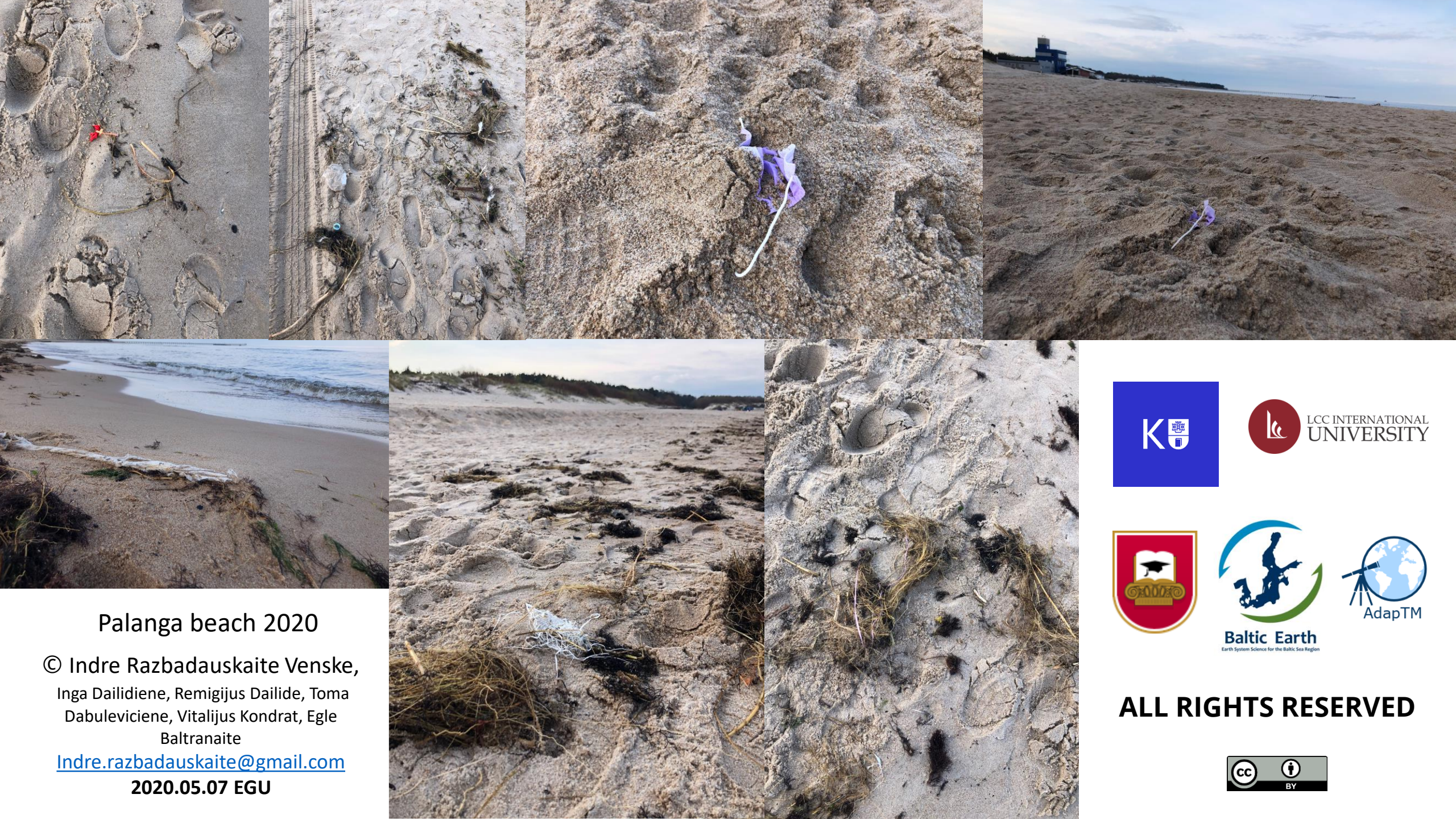
© Indre Razbadauskaite Venske,
Inga Dailidiene, Remigijus Dailide, Toma
Dabuleviciene, Vitalijus Kondrat, Egle
Baltranaite

Indre.razbadauskaite@gmail.com

2020.05.07 EGU

ALL RIGHTS RESERVED





Palanga beach 2020

© Indre Razbadauskaite Venske,
Inga Dailidiene, Remigijus Dailide, Toma
Dabuleviciene, Vitalijus Kondrat, Egle
Baltranaite

Indre.razbadauskaite@gmail.com

2020.05.07 EGU



ALL RIGHTS RESERVED

