



resonate

RESILIENCE THROUGH
NATURE-BASED THERAPIES

CS-4 NATURE-MET-P

Presenter Angelica Moè

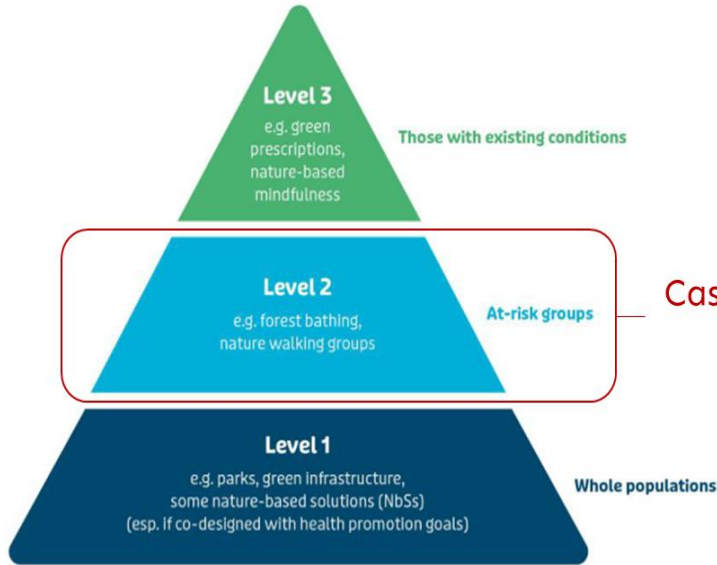
AM25 Padova - 18/09/2025



The Resonate project is funded by the European Union's Horizons Europe Research and Innovation programme under grant agreement No. 101081420 and co-funded by the UK Research and Innovation grant award No. 10063874



UK Research
and Innovation



Case studies
4- 6

CS 4 – Padua
urban green



CS 5 – Salzburg
rural mountainous



CS 6 – Barcelona
coastal blue



Evaluating the effectiveness of a 5-weeks nature-based intervention with people at risk of metabolic syndrome on quality of life, physical and psychological resilience: allostatic load, well-being, attitudes, environmental concerns

Alternating light walking (10 minutes) and mindfulness activities (10 minutes). Fully guided first week. Self-guided with a guided session offered weeks 2-5. Screening at week 0, week 5, week 10





PHYSIOLOGICAL

- HRV: Heart Rate Variability
- SBP: Systolic Blood Pressure
- DBP: Diastolic Blood Pressure



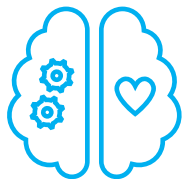
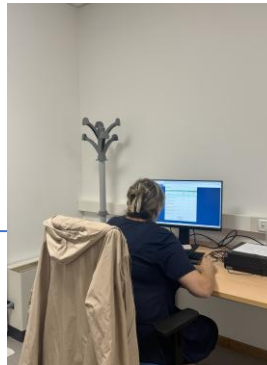
- Waist-hip ratio
- CRP (saliva): C-Reactive Protein
- RHR: Resting Heart Rate
- PEF: Peak Expiratory Flow



QUALITY OF LIFE

- Socio demographics questions
Environmental habits and childhood experiences
- Short Form Health Survey (SF-12)
- Local nature attitudes (PANS-6)

- Current Indirect Contact with Nature (From PANS-M1Q1)
- Contingent evaluation
- Use of Care Services



PSYCHOLOGICAL

- Trait Mindfulness (FFMQ-15)
- Physical Activity (IPAQ-SF)
- Subjective Well-being (OECD-4)
- Well-being, emotions (SPANE)
- Sense of community
- Motivation and Ideal Self

- Loneliness
- Environmental Concern
- Pro environmental Behaviors
- Resilience (STARS)
- Nature Connectedness
- Social Desirability

INCLUSION CRITERIA

- 1 People at risk of metabolic syndrome (at least two of five of the following criteria):
 - a Abdominal obesity:
Waist circumference >102 cm (men), >88 cm (women)
 - b Triglycerides: ≥ 150 mg/dL or Rx
 - c HDL cholesterol: <40 mg/dL (men), <50 mg/dL (women) or Rx
 - d Blood pressure: $\geq 130/\geq 85$ mmHg or Rx
 - e Fasting glucose: ≥ 110 mg/dL or Rx
2. 40–70 years old
3. Sedentary lifestyle [Category 1 (Low) or 2 (Moderate) of IPAQ-SF]
4. Ability to participate in tours in urban green areas

	Wave 1 Autumn 2024	Wave 2 Spring 2025	Wave 3 Autumn 2025	Total
Enrolled	23	63	48	134
Dropout	7	11	4	22
Participant	16 (4)	52 (9)	44 (7)	112 (20)

EXCLUSION CRITERIA

- 1 Active lifestyle (Category 3 [High] of IPAQ-SF)
- 2 Pregnancy
- 3 Enrollment in any other interventional clinical trial

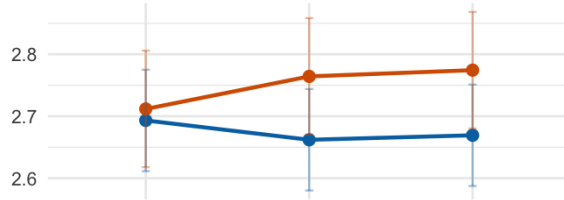


In brackets
males (overall
only 18%)

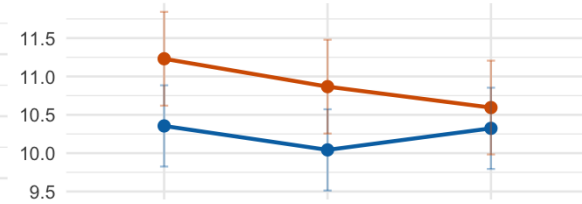


Condition ● Control ● Experimental

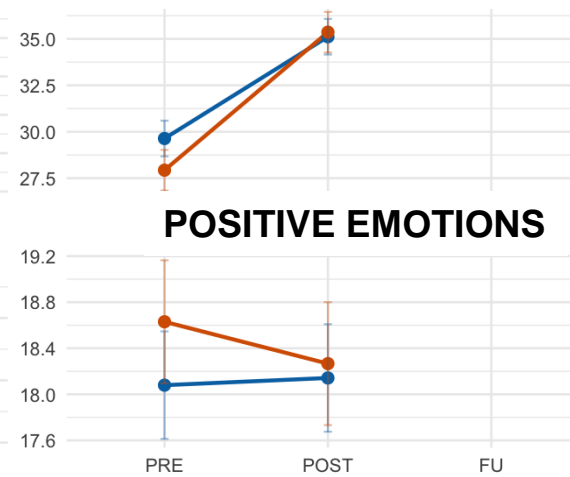
MINDFULNESS



LONELINESS



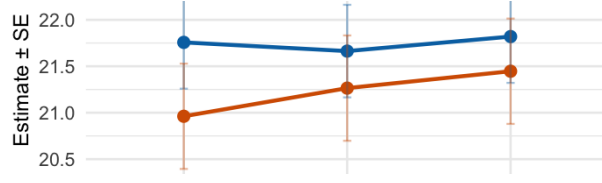
NATURE CONNECTEDNESS



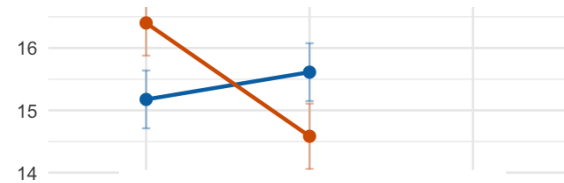
Linear Mixed Effect Models

Controlled for age, gender, number of activities performed

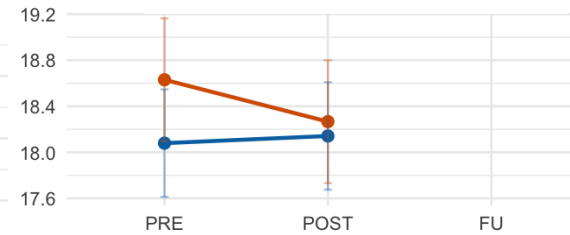
SELF-DETERMINED MOTIVATION



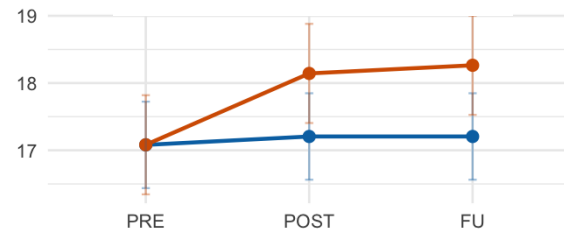
NEGATIVE EMOTIONS



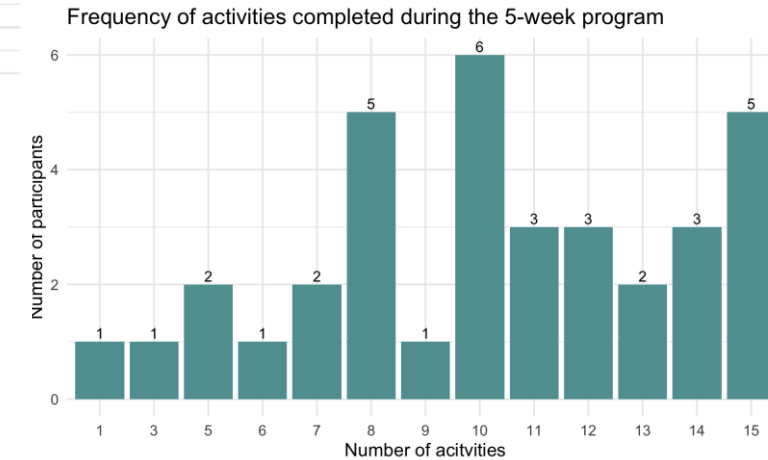
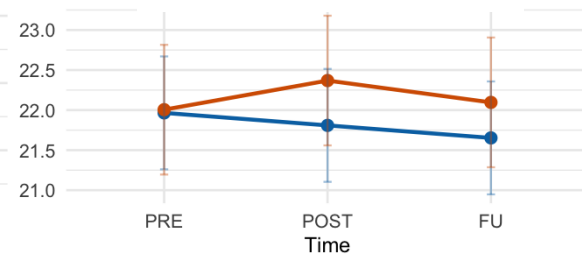
POSITIVE EMOTIONS



STATE RESILIENCE



TRAIT RESILIENCE





resonate

Upcoming challenges



UKRI
UK Research
and Innovation

Dissemination to participants first, then stakeholders, the whole population ...

Retain participants in the sessions and to come back for the screenings

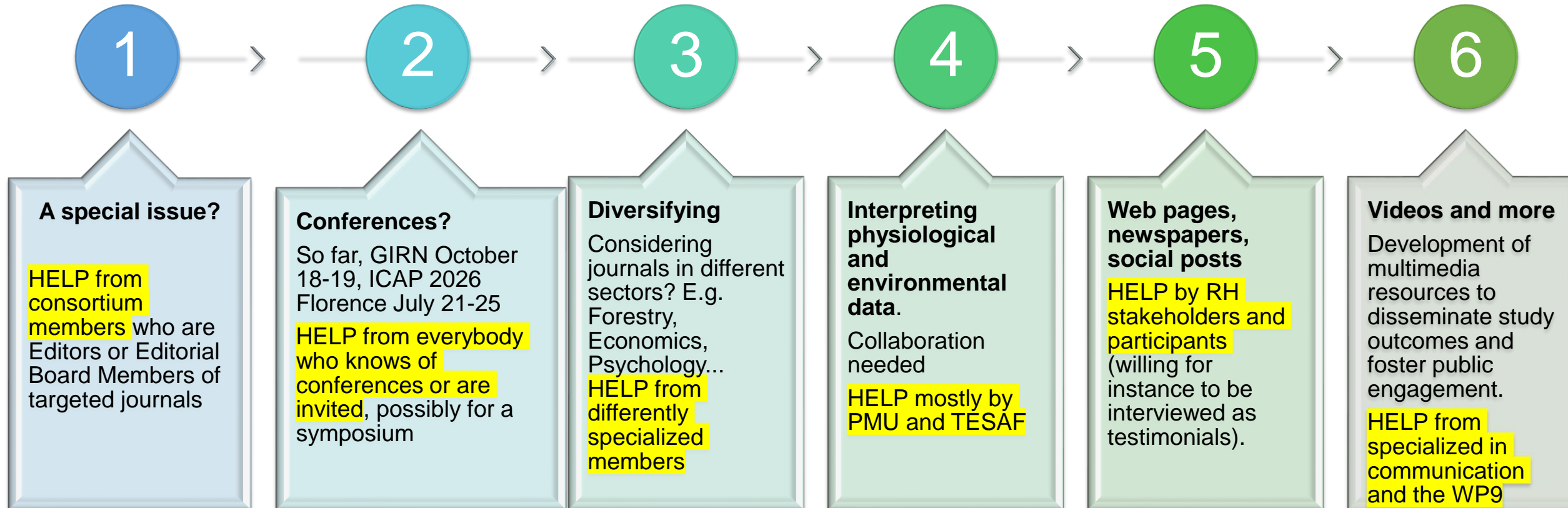
Interpreting physiological and environmental data



Writing successful papers

Managing the data: merging physiological, psychological, and environmental

Publication ideas + Needs for collaborations



Timeline and next steps

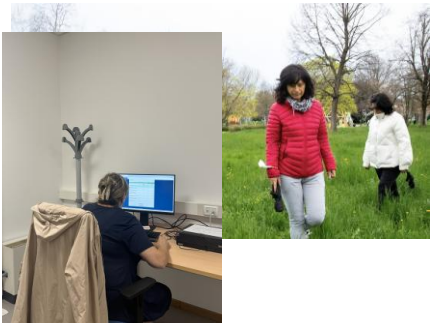
Third wave of data collection

Finish third wave and saliva sample shipment to Salzburg

Finalize the organization of the dataset with physiological and environmental measures

Data Analysis

Publications, conferences, dissemination



Month	Date	Open	High	Low	Close							
1	Jan	05/01/2010	1132.66	1136.61	1129.66	1135.52						
2	Jan	06/01/2010	1135.71	1139.19	1133.55	1137.14						
3	Jan	07/01/2010	1136.27	1142.46	1131.32	1141.69						
4	Jan	08/01/2010	1140.52	1145.99	1136.22	1144.96						
5	Jan	11/01/2010	1145.96	1149.96	1142.02	1146.98						
6	Jan	12/01/2010	1143.81	1143.81	1131.77	1136.22						
7	Jan	13/01/2010	1137.31	1148.4	1133.18	1145.68						
8	Jan	14/01/2010	1145.68	1150.41	1143.18	1146.46						
9	Jan	15/01/2010	1147.72	1147.77	1131.39	1136.03						
10	Jan	19/01/2010	1136.03	1150.45	1135.77	1150.23						
11	Jan	20/01/2010	1147.95	1147.95	1129.25	1138.04						
12	Jan	21/01/2010	1138.68	1141.58	1134.84	1136.48						
13	Jan	22/01/2010	1115.49	1115.49	1090.18	1091.76						
14	Jan	25/01/2010	1092.4	1102.97	1092.4	1096.78						
15	Jan	26/01/2010	1095.8	1103.89	1089.86	1092.17						
16	Jan	27/01/2010	1091.94	1095.51	1083.11	1091.5						
17	Jan	28/01/2010	1096.93	1100.22	1078.46	1084.53						
18	Jan	29/01/2010	1087.61	1096.43	1071.59	1073.87						
19	Jan	01/02/2010	1073.89	1089.38	1073.89	1089.19						
20	Feb	02/02/2010	1096.05	1106.79	1087.96	1101.32						
21	Feb	03/02/2010	1100.67	1102.72	1093.97	1097.28						



SEPTEMBER-
OCTOBER 25

NOVEMBER 25

DECEMBER 25

JANUARY-
FEBRUARY 26

MARCH 26
onwards

Thank you!



TESAF



The Resonate project is funded by the European Union's Horizons Europe Research and Innovation programme under grant agreement No. 101081420 and co-funded by the UK Research and Innovation grant award No. 10063874

