



**URBAN
WASTE**
URBAN STRATEGIES FOR
WASTE MANAGEMENT
IN TOURIST CITIES

Social and economic impact assessment of pilot measures

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Social impact assessment - indicators

Method derived from SLCA guidelines (UNEP & SETAC, 2009) – very simplified!

Indicators relevant to the measure context:

- Working hours
- Employment
- Job satisfaction
- Meaningfulness
- Gender
- Training



Economic impact assessment - indicators

- Costs [€] related to implementation of the measures
- Savings [€] related to implementation of the measures



Data collection

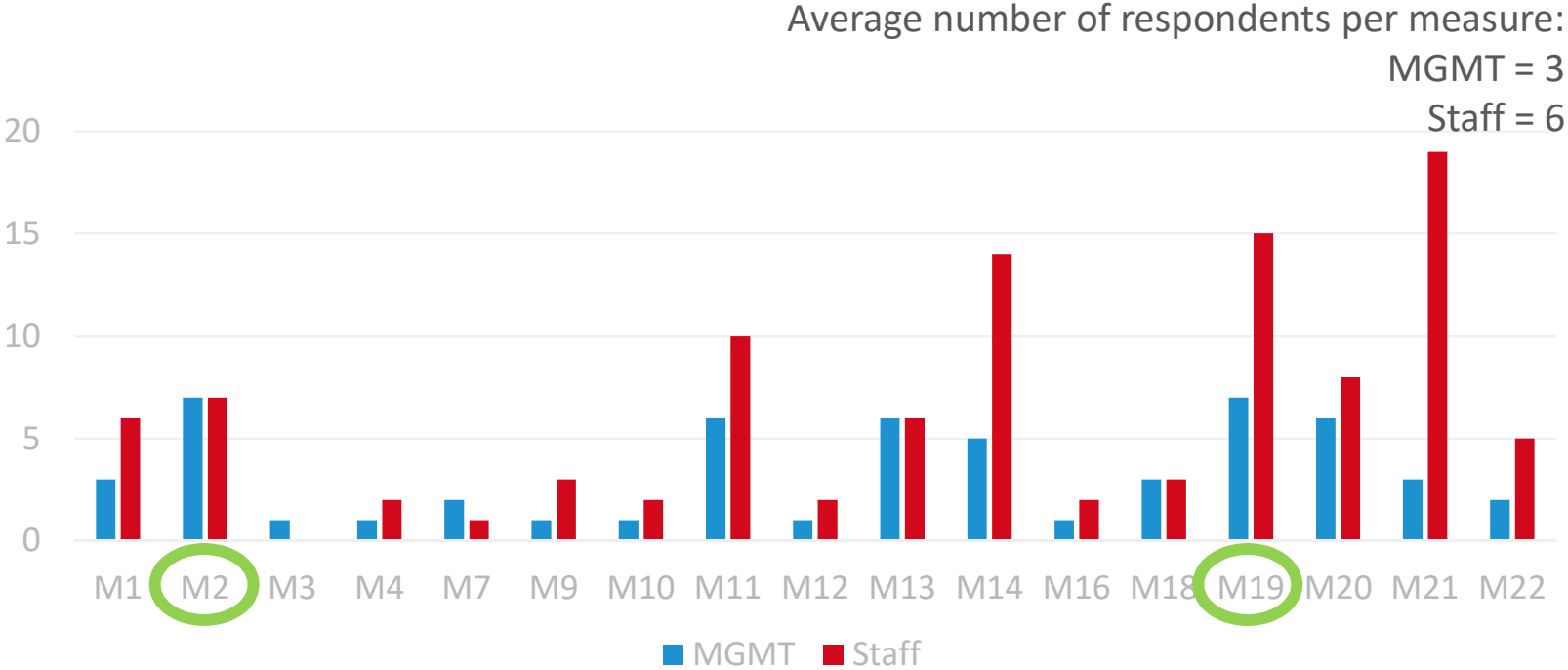
- A digital survey was drafted to cover the chosen indicators
 - Both social and economic aspects were included
 - Both management and worker level were adressed
 - Ratings 1-5
 - Pre-defined intervals
- The survey was distributed to the tourist establishments via the pilot cities.



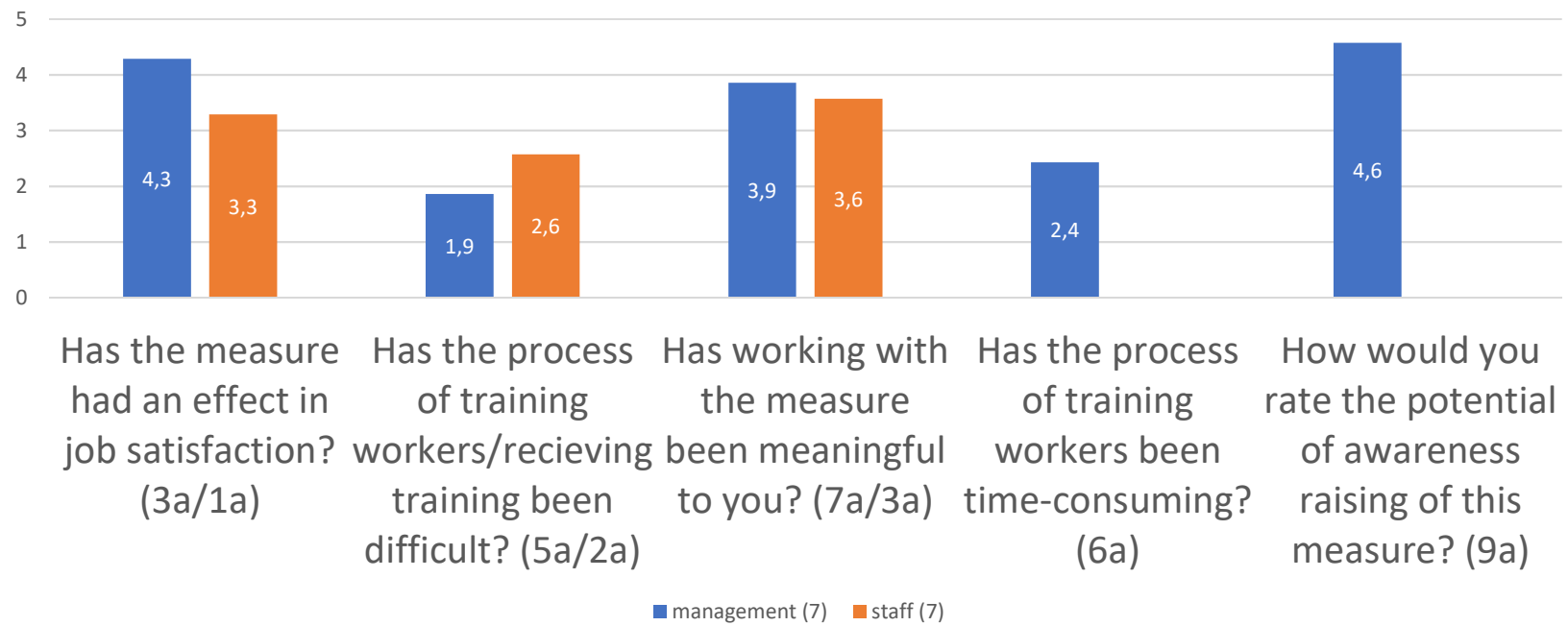
Survey parameters

- Working hours
- Employment
- Job satisfaction
- Meaningfulness
- Gender aspects *not included here*
- Training
- Training
- Potential for further sustainable measures
- Labor costs
- Equipment costs
- Materiel costs
- Savings
- Respondent statements and comments

Respondents per measure



M2 - Food waste prevention at buffets and restaurants (social)

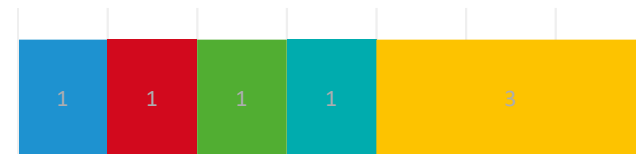


M2 - Food waste prevention at buffets and restaurants (social)

- Management respondents: Copenhagen = 2, Tenerife = 4, Kavala = 1
- Worker respondents: Tenerife = 4, Lisbon = 2, Florence = 1
- Working hours: Tenerife = reduction <10 hours per week, others = unchanged
- Workers: Tenerife (2) = reduction 2-5 workers, Tenerife (1) = expanded >5 workers, others = unchanged
- Respondent statements:
 - "It has been a bit more intense at the beginning, but as the staff has become accustomed, it has become daily (routine) and they have adapted to it within their working hours, as one more task" (Tenerife)
 - "For the staff directly involved they enjoyed making a difference as part of Urban Waste" (Copenhagen)
 - "Some of the employees feel that it is extra work and (are) therefore not pleased with it" (Copenhagen)

M2 - Food waste prevention at buffets and restaurants (economic)

4a. What were the economic savings due to the implementation of the measure?



3a. What were the expenses of the measure in terms of material costs?



2a. What were the expenses of the measure in terms of equipment costs?

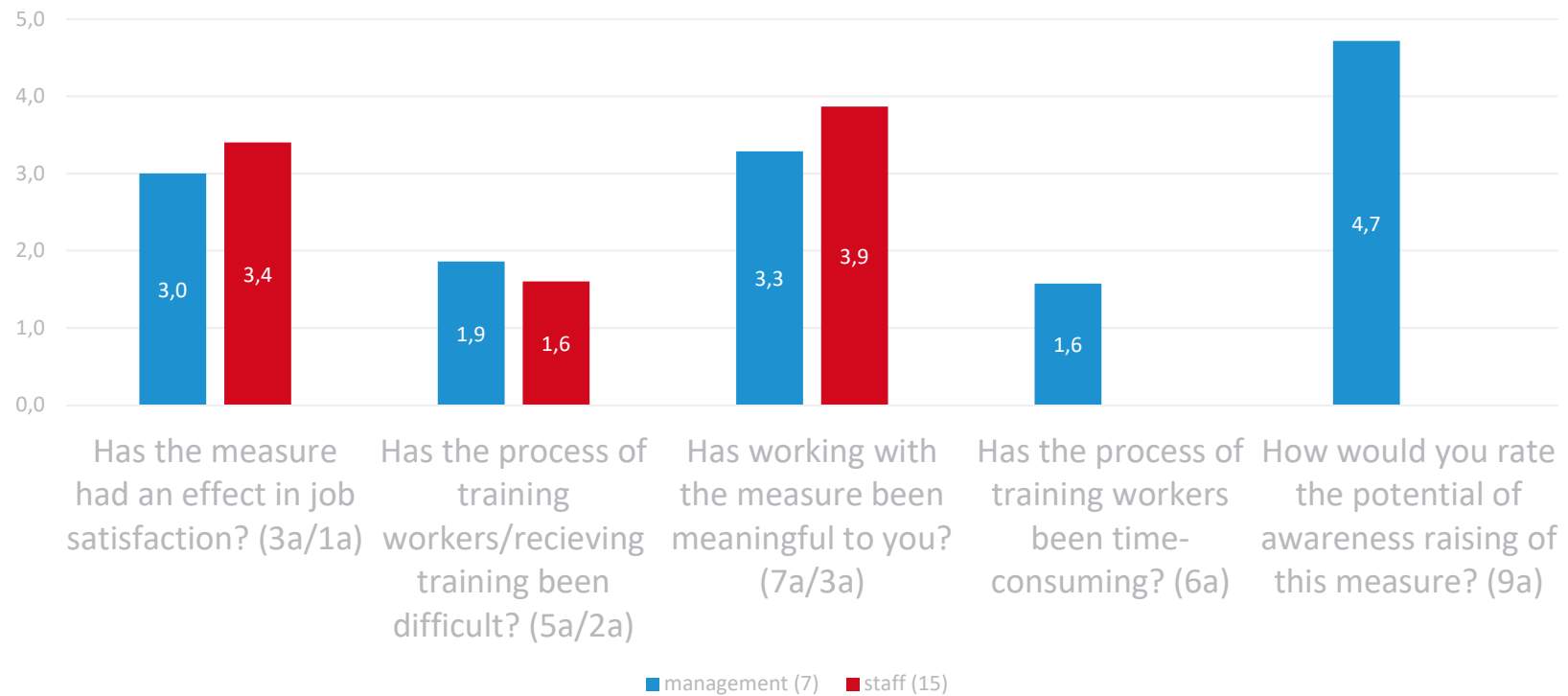


0 1 2 3 4 5 6 7
respondents

M2 - Food waste prevention at buffets and restaurants (economic)

- Most known costs were < €500 (e.g. bags and explanatory signs).
- Savings varied from < €500 (reduction of food waste only) to > €10.000 (including expenses saved from reducing and adjusting production)
- Respondent statements:
 - “We had a food waste competition, where we included the guests. The hotel with the least plate waste after breakfast won. During that competition we saved on average DKK 8.000 (approximately € 1.050) a day in food wasted compared to the week before” (Copenhagen)
 - “The customers are not aware of the measures we take towards minimizing food waste” (Copenhagen)
 - “Like everything at the beginning there is rejection, but everything is great, it is a question of adapting” (Tenerife)

M19 - Awareness campaign against marine litter (social)



M19 - Awareness campaign against marine litter (social)

- Management respondents : Nice = 6, Santander = 1
- Worker respondents: Nice = 6, Dubrovnik = 5, Santander = 4
- Working hours: Nice = unchanged, Santander = increase > 20 hours per week, Dubrovnik = n/a
- Workers: Nice & Santander = unchanged, Dubrovnik = n/a
- Respondent statement:

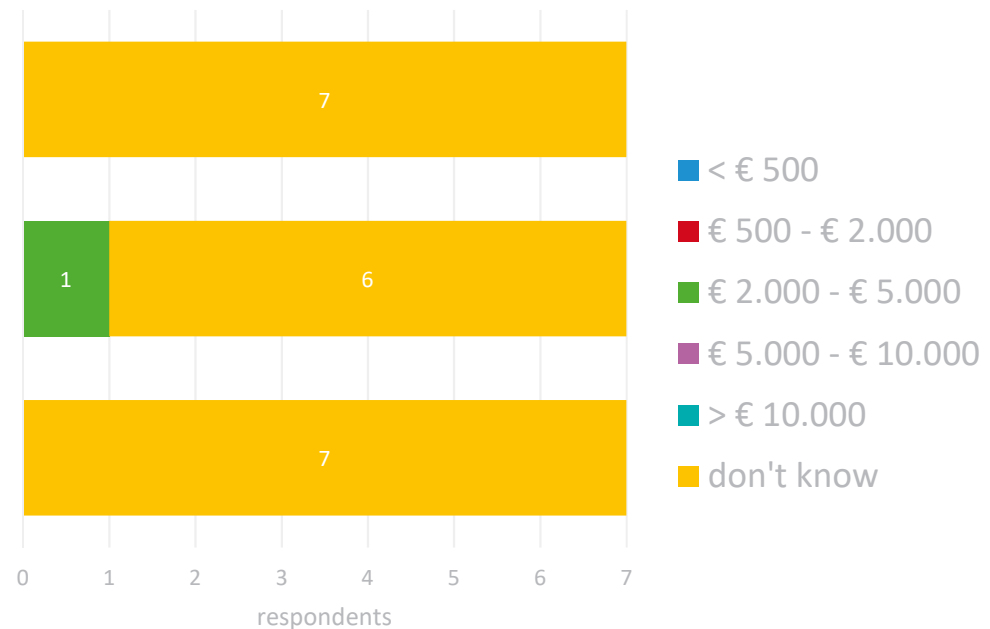
“I believe the key for awareness is the education for children” (Santander)

M19 - Awareness campaign against marine litter (economic)

4a. What were the economic savings due to the implementation of the measure?

3a. What were the expenses of the measure in terms of material costs?

2a. What were the expenses of the measure in terms of equipment costs?



M19 - Awareness campaign against marine litter (economic)

Costs: Santander = €2,000-€5,000 (caps, flags and brochures), Nice & Dubrovnik = n/a

Savings: Dubrovnik & Santander = n/a, Nice = none

Conclusions - social impacts

- High ratings for potential for awareness raising.
- Simple, visible measures involving hands-on action seems to have a clear signal value
- Both managers and employees assess the difficulty of training below average.
- Job satisfaction and the perceived meaningfulness varies considerably. Explanations...

Dissatisfaction with more work tasks? OR

The work is not noticeably different from normal?



Conclusions - economic impacts

- Many respondents did not know the actual costs of the measures.
- Most costs were less than € 2,000 and correspond mostly to material costs and consumables.
- A few cases had higher costs due to investment in container facilities and other large equipment.



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