THE EFFECTS OF RISK MANAGEMENT MEASURES IN SILKEBORG

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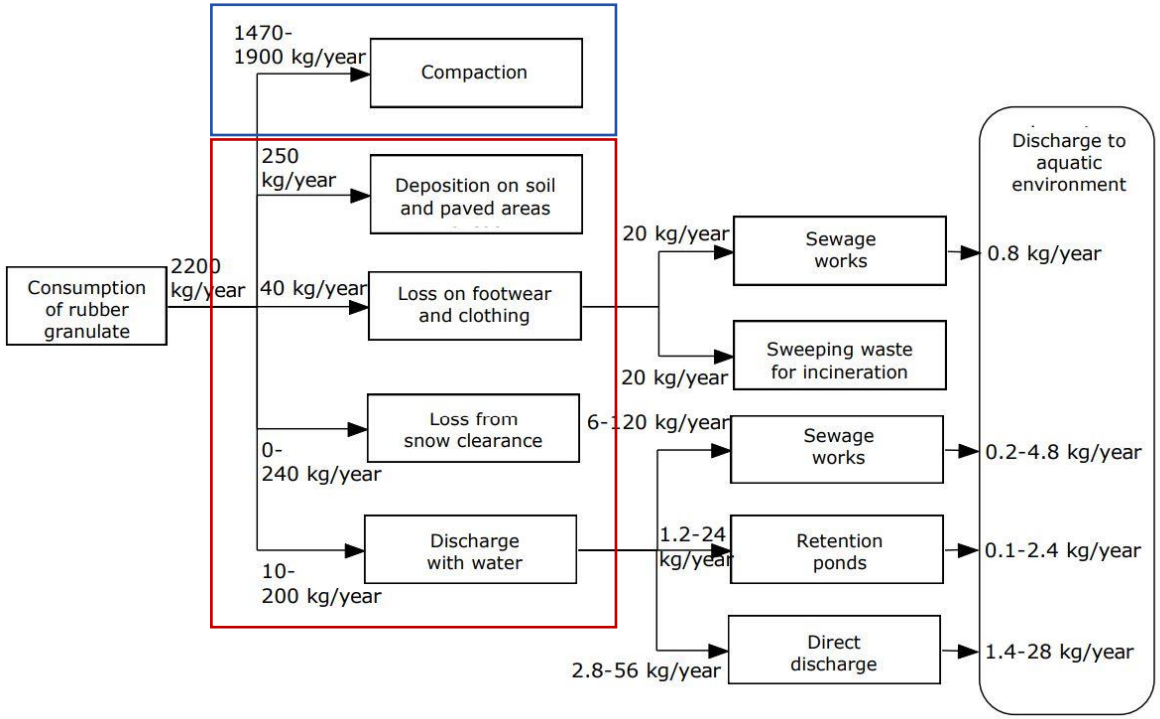
EXISTING MASS BALANCE DATA

Breakdown of mass balance for rubber granulate based on German, Dutch, Norwegian, Swedish and Danish studies

No risk management measures

- The main consumption is due to compaction
- Loss from the field is 290-690 kr/year with
  - 250 kg/year from deposition on soil and paved areas
  - 0-250kg/year from snow clearance
  - 10-200kg/year is discharged via water



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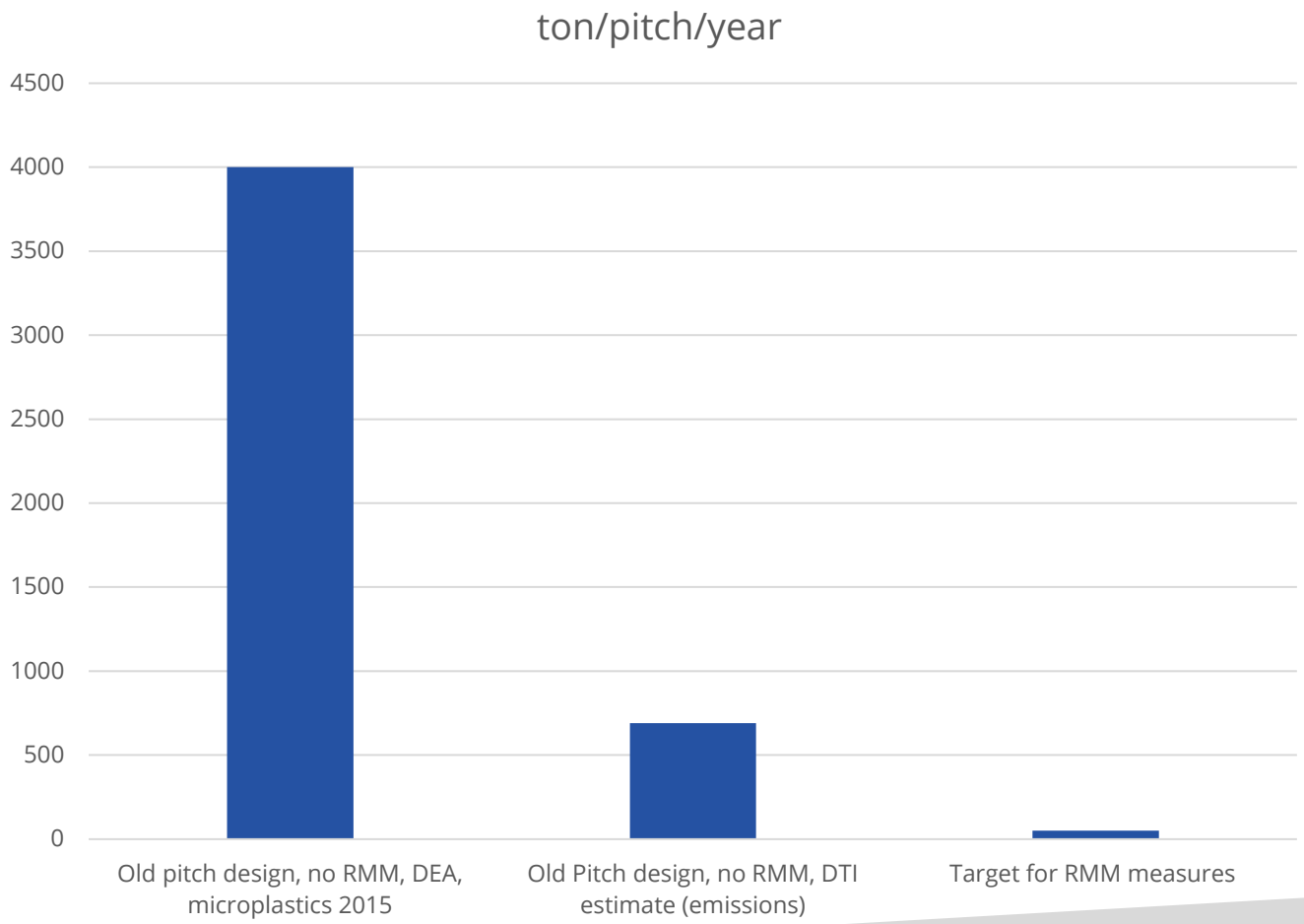
Løkkegaard, Malmgren-Hansen, Nilsson: Massebalancer af gummigranulat, som forvinder fra kunstgræsbaner - med fokus på udledning til vandmiljøet, Teknologisk Institut, 2019

TARGET FOR NEW INFILL DISCHARGE



- Construction and service according to CEN 17519:2020
- New limits for discharge of rubber granulates from the football pitch requires documentation
- Expected discharge: less than 7g/m2 or 50kg/pitch per year

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2-YEAR TEST PROGRAM ON PITCH IN SILKEBORG

2-year test program for newly established pitch in Silkeborg:

CEN compliant RMM

Measurements of discharge of granulates from:

- Fence/barriers
- Player exit point
- Service equipment
- Loss via water

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MEASUREMENTS AT SILKEBORG





- Discharge over the sides of the pitch
- Discharge via players
- Discharge via service equipment
- Discharge via water

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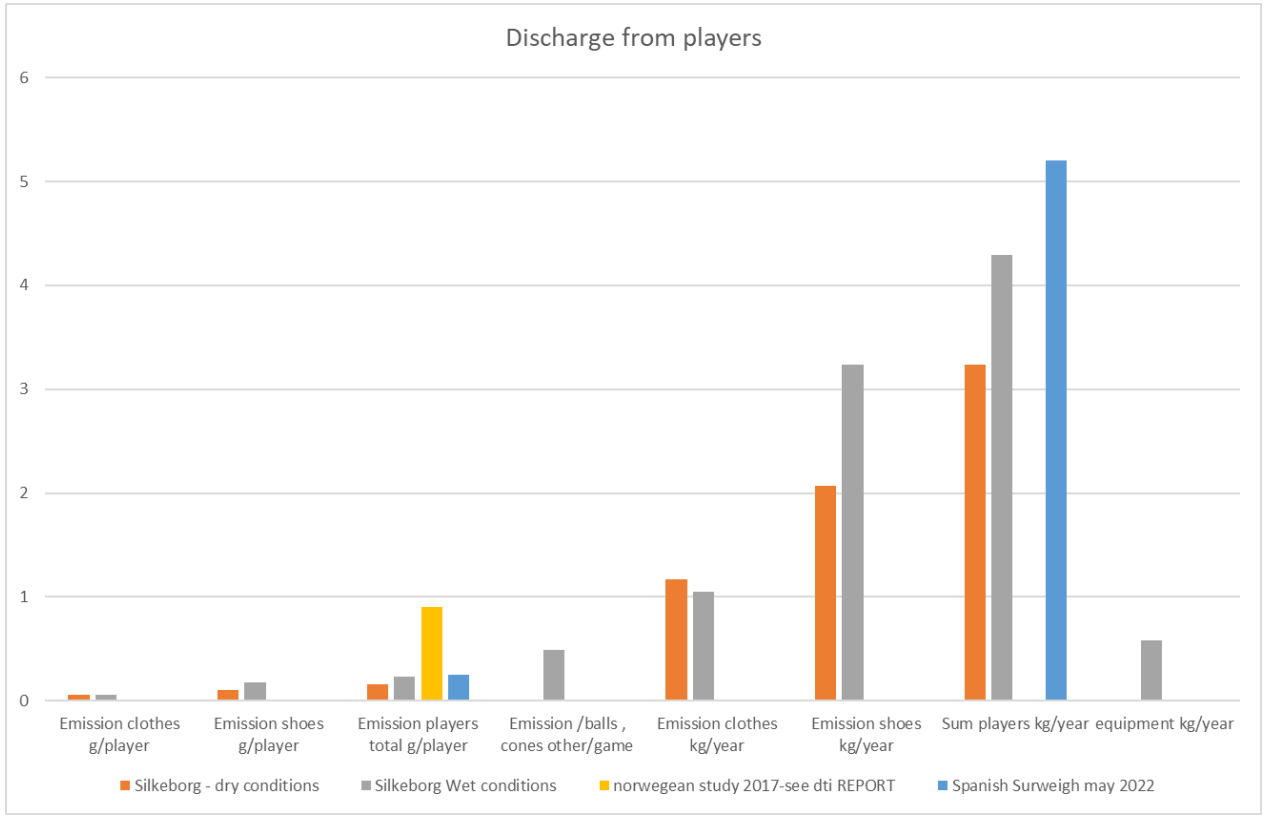
PRELIMINARY RESULTS FROM SILKEBORG

Analysis of discharge via players

- 2 campaigns: dry and wet
- Comparison to Norwegian study report 2017 and Spanish Survey May 2022
- Sum of emissions from Silkeborg: 4,86 kg/year



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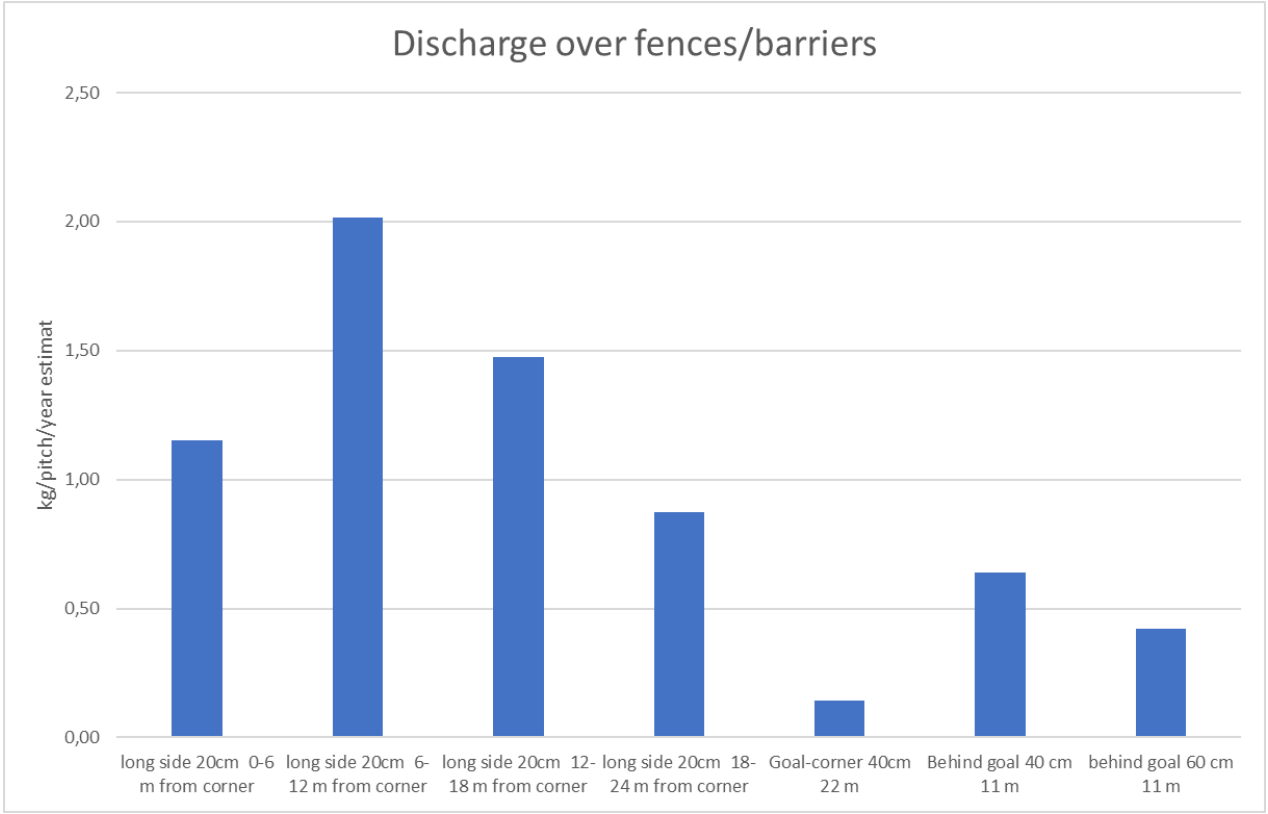
PRELIMINARY RESULTS FROM SILKEBORG

Analysis of discharge over fences/barriers

- Collection on geotextile along the pitch (68mx2m)
- Assumption: 1month = 1/12 of a year
- 20cm fences: 1,4kg/year
- 40cm fences 0,4kg/year
- 60cm: 65% of 40cm



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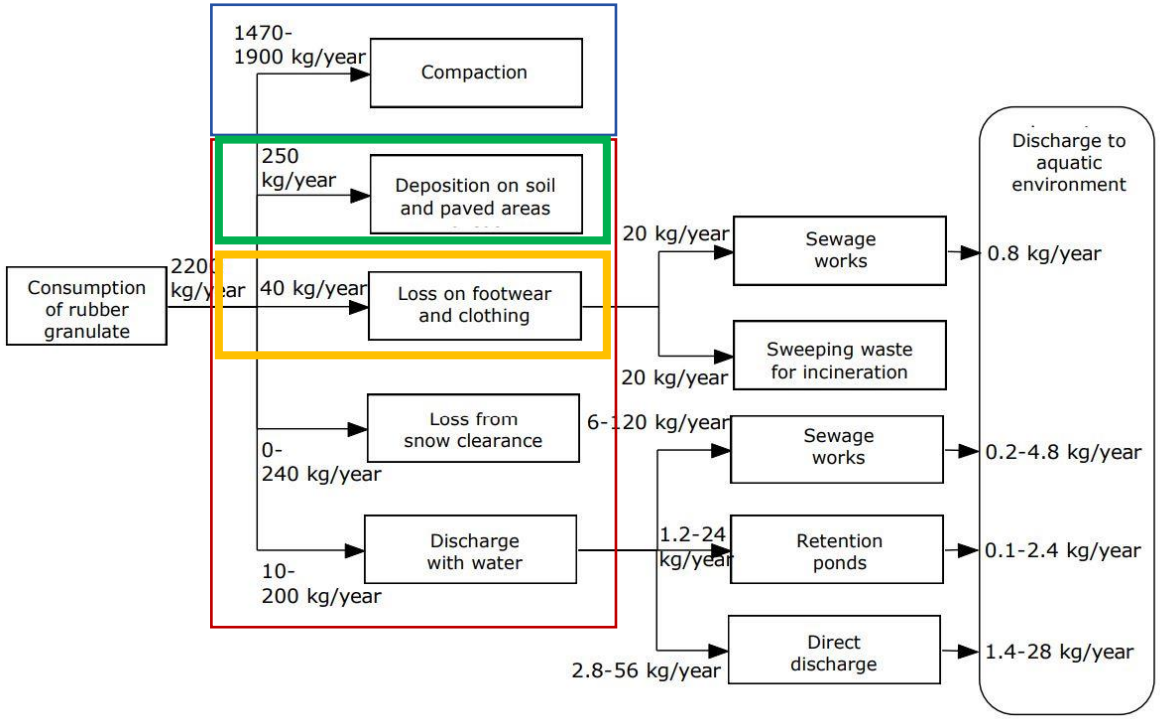
PRELIMINARY RESULTS FROM SILKEBORG

- 3-5kg from players
- 1,4 kg over barriers

- Service Equipment: later this year
- Discharge via water: Later this year



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