

Product Details

Product Life Estimate:
5 years, 1300 hours
(Source: Okala: Learning Ecological Design, 45, Table G)

Functional unit:
impacts/hour

System boundaries:
Includes CD player, 118 AA batteries, transport, disposal. Does not include headphones or packaging, because of unavailability.

- Alternate case 1: Recycled plastic housing
Alternate case 2: Smaller circuit board (50%)
Alternate case 3: Rechargeable batteries
Alternate case 4: Combined alternatives

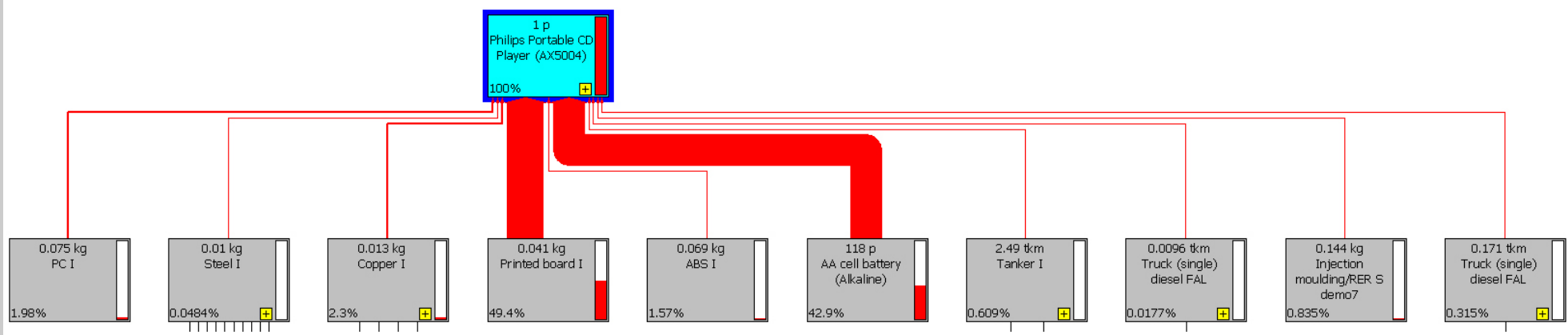
LCA: Philips Portable CD Player

Devin Mooers, Annika Matta

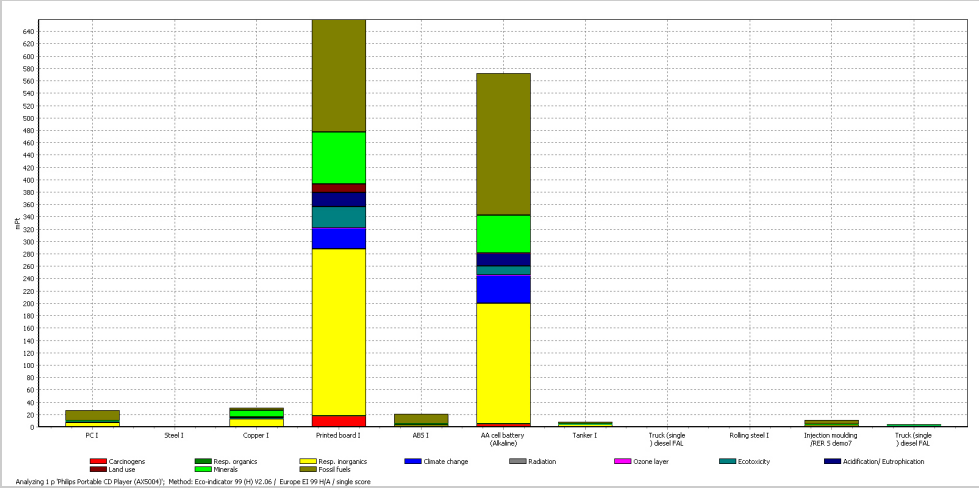
Philips AX5004



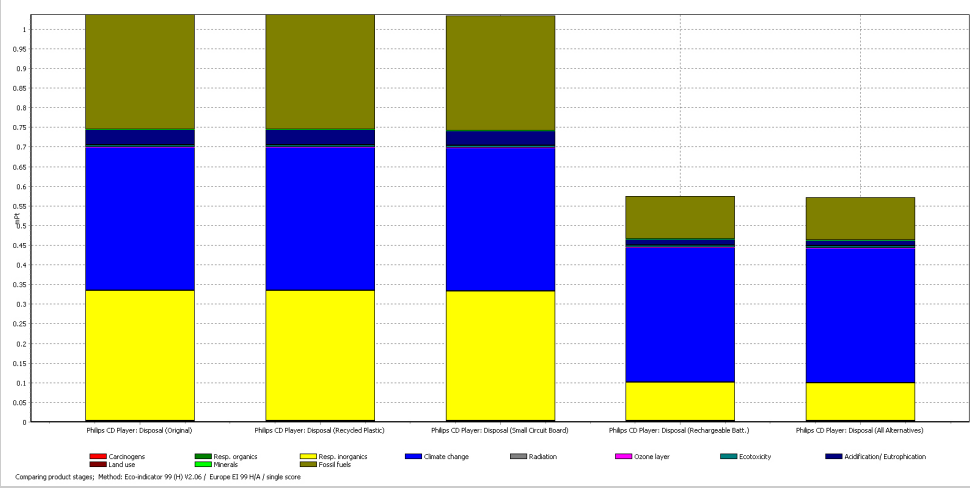
Sankey Diagram - Original



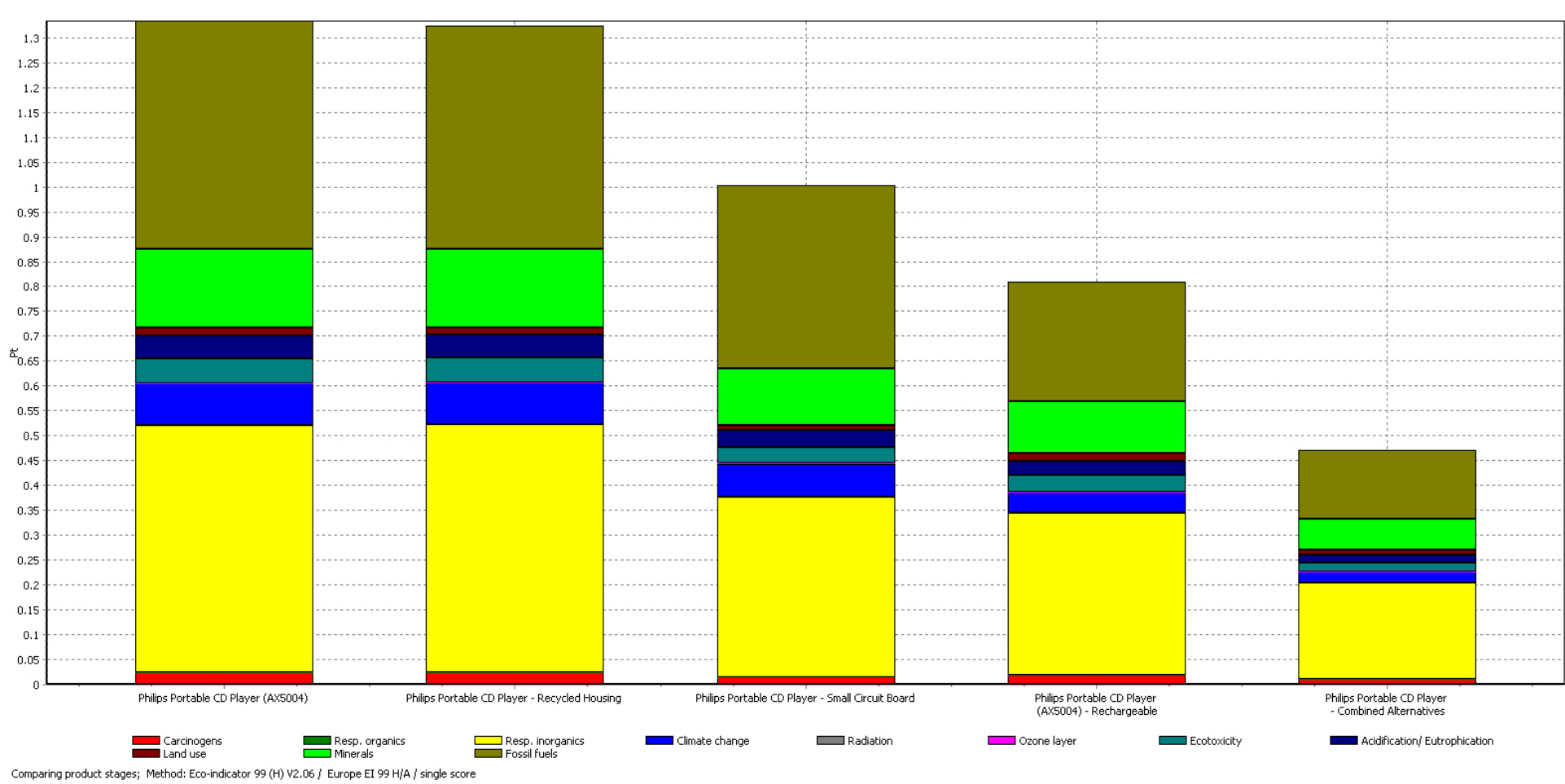
Manufacturing Detailed Impacts - Original



Disposal - Comparison



Manufacturing - Comparison



Discussion: One can clearly see from the original-scenario manufacturing diagram that the two biggest impacts were 118 AA batteries and the printed circuit board, by a large margin. It makes sense, then, that using rechargeable batteries and halving the circuit board size were the most effective alternatives. Using a recycled plastic housing made almost no effect—there is much more of a difference in impact between, say, recycled aluminum and virgin aluminum than between recycled and virgin plastic. Using all the alternatives gave a **66%** reduction in impact.