



A.I.S.E. EU Product Environment Footprint (PEF)



P&G

Testimonial Procter & Gamble

Diederik Schowanek & Mark Stalmans

Brussels, March 24 2014



Environmental Stewardship
Sustainability, Safety & Science



Why Participate?

- The EU PEF pilot project is **likely to set the framework for environmental communication on consumer goods for the next decade(s) in EU**, and more globally
- The PEF pilot is very business-relevant for P&G – we have touch points in many PEF/OEF categories
- A large fraction of consumers are environmentally aware, and we want to **ensure information provided to consumers is transparent, accurate, relevant, and actionable**
- We have significant LCA and consumer research expertise to share
- We prefer one 'deep dive' rather than to spread our resources thin over multiple pilots - **laundry was considered the best starting point**



Why Participate?

- We want to better understand the potential value and limitations of a PEF approach, e.g.
 - Understand how the PEF will compare to, and impact other environmental assessment methods such as regular ISO LCA, the AISE Charter and other voluntary industry initiatives, and EU Ecolabel
 - Further explore the scientific validity, practical applicability and discriminating power of LCA (impact) methods recommended by the PEF Guidance (in particular at brand/sku level)
 - Assess the overall efficiency and effectiveness of product environmental labels as tools to drive mainstream consumer engagement and sustainable behaviour (purchase and/or use)
 - Assess the impact on long term product innovation



P&G's Environmental Vision & Goals

Conservation of Resources

Our Vision:

- Design and manufacture products that maximize the conservation of resources

Our 2020 Goals:

- Packaging reduction (20%)
- Energy, CO₂, and water manufacturing reductions
- Cold water washing (70%)
- Transportation reduction (20%)

Renewable Resources

- 100% renewable energy
- 100% renewable or recycled materials

- Renewable energy
- Renewable materials, pulp, palm oil, paper packaging

Worth from Waste

- Zero consumer or manufacturing waste to landfill

- Manufacturing waste reduction
- Pilots to understand how to eliminate landfilled/dumped waste



P&G Market Research on Sustainability and Consumer Types



P&G's approach is to drive meaningful improvements in sustainability by targeting mainstream consumers

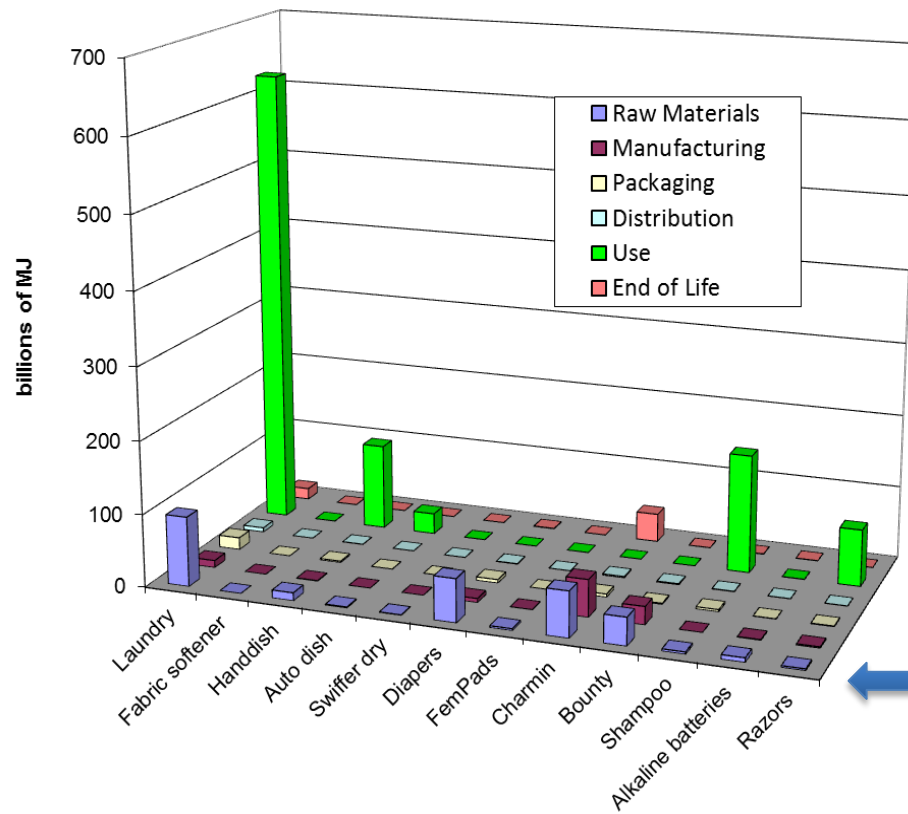
Data have been stable over time and consistent worldwide (US, Canada, Brazil, Europe, Japan, Indonesia, etc.).





P&G's Company Footprint

- Understanding 'Hotspots' to Guide R&D -



(Example: Energy Use)





P&G & AISE Experience in LCA - Some Milestones

- Since 1990: P&G LCA work on Diapers
- 1992-1995: Involved in CEFIC project on LCIs for Detergent Surfactants
- 1998-1999: Building & review of P&G's Laundry LCA Models and Data Systems (foundation work)
- 2000: LCA on Compaction of Granular Detergents in Nordic Countries (published)
- 2000: Contribution to the AISE LCA on Granular Detergents
- 2001: Liquids and Liquitabs LCA
- 2001: Comparison of 5 Laundry Product Forms in UK (published)



by Gert Van Hoof, Diederik Schwanek and Tom CJ Feijtel, Strombeek-Bever, Belgium

UK Laundry Comparison

Comparative Life-Cycle Assessment of Laundry Detergent Formulations in the UK

Part I: Environmental fingerprint of five detergent formulations in 2001

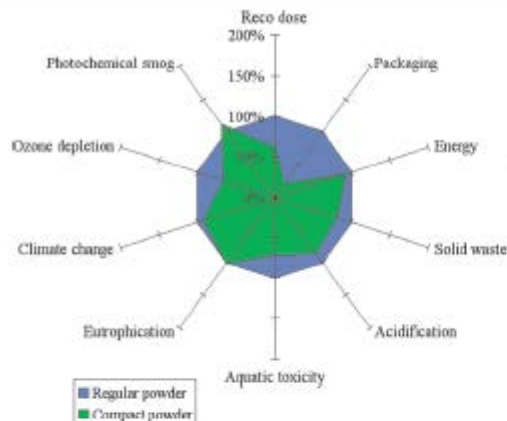


Figure 8 CP vs. RP environmental fingerprint based on LCA and key indicators for 1 wash in the UK

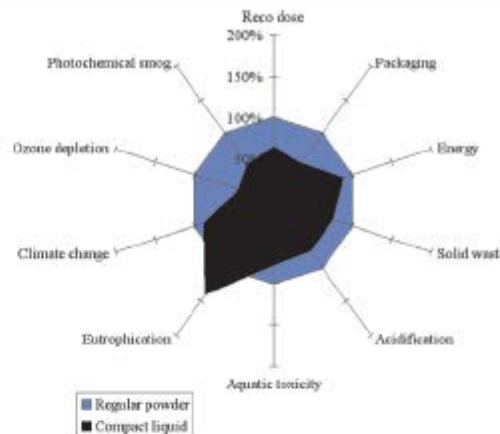


Figure 10 CL vs. RP environmental fingerprint based on LCA and key indicators for 1 wash in the UK

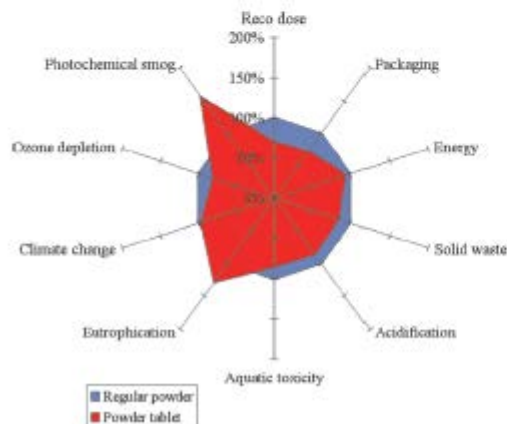


Figure 9 PT vs. RP environmental fingerprint based on LCA and key indicators for 1 wash in the UK

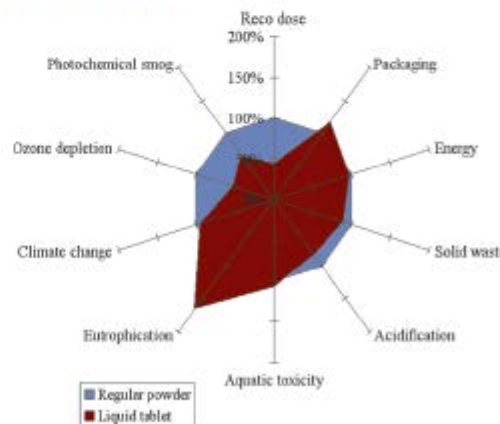


Figure 11 LT vs. RP environmental fingerprint based on LCA and key indicators for 1 wash in the UK

Relevance:

- First systematic LCA comparison of laundry products
- Demonstrates that product forms can be compared in a relative way if done by exactly the same methodology & data
- Observed differences can always be traced back and verified (own data)
- Used as guidance for new product development



P&G & AISE Experience in LCA - Some Milestones

- 2006: Cold Wash LCA in France (Ariel actif a froid)
- 2006: Contribution to AISE LCA on Compaction in Eastern Europe
- 2008: Start Carbon Footprinting of Detergents
- 2010: Start Grenelle Experiment in France
- 2011: New Liquitabs (pouches) LCA
- 2013: Start AISE PEF Pilot





Learnings from Carbon Footprinting (CF)

- Rapid proliferation of different CF schemes makes it unworkable
- Establishing 'true' differences between products is very difficult
- Uncertainty analysis should be part of all assessments
- Major differences in laundry CF comes from the use temperature and electricity grid, but not from the products (example below)

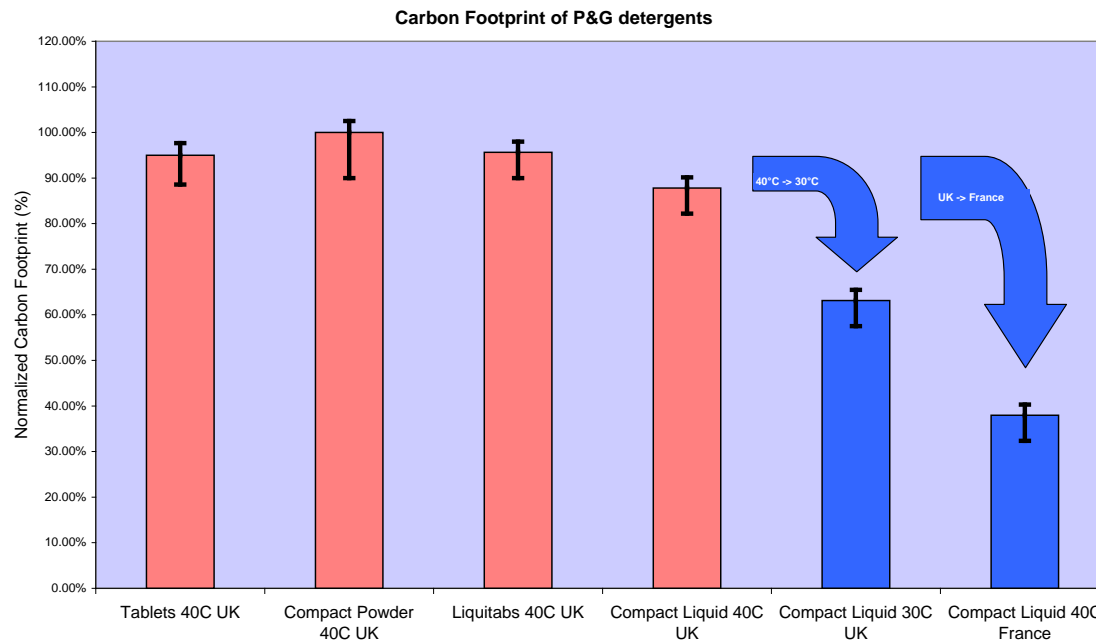


Figure: Comparison of the CF and approximated uncertainty range for 4 different P&G detergent types sold in the UK (2009), and effect of country (electricity grid) and wash temperature.

All data were normalized with Compact Powder as reference. Absolute CFs are around 600 g CO₂-eq./wash.



Learnings from Carbon Footprinting

Research question: *“When can one claim the CF of Product A is statistically different from the CF of Product B?”*

Int J Life Cycle Assess (2010) 15:79–89
DOI 10.1007/s11367-009-0123-3

CARBON FOOTPRINTING

Uncertainties in a carbon footprint model for detergents; quantifying the confidence in a comparative result

Arjan de Koning • Diederik Schowanek •
Joost Dewaele • Annie Weisbrod • Jeroen Guinée



Learnings from the Grenelle Experimentation (Fr)

- Multi-indicator approach with strong ISO LCA basis, and with **quantitative data 'pushed' to the consumer**
- Triggered active collaboration within multiple sector(s)
- **Highlighted issues** and limitations caused by different or lacking data sources, and the different tools and indicators used
- Illustrated the **need to have standardisation** and an official guidance document describing the **category rules**
- Highly divergent views/approaches on consumer communication, but very useful as a learning . **Clear need for consumers to learn and assimilate**
- Showed the **problem of coherence with existing labels**, voluntary initiatives, and EU initiatives. Lacked an international dimension





Learnings Regarding Impact Assessment Methods (LCIA)

- Strong scientific competition leads to a rapid LCIA method proliferation with growing complexity and overall low practical applicability
 - Improving science by introducing fate & exposure models in ecotoxicity methods (USEtox)
 - Subdividing environmental compartments and developing specific methods for subcompartments (e.g. eutrophication, indoor human toxicity)
- **Only few LCIA methods** can be considered as ‘**mature**’
- Calculation of LCIA characterization factors requires high expertise level and specific tools
- Inventory (LCI) data and impact methods (LCIA) should be better tuned to each other
- Conceptual differences in impact methods leads to confusion in product ranking



Product Ranking Issues Related to LCIA Methodology

Ecotoxicity impact assessment of laundry products: a comparison of USEtox and critical dilution volume approaches

Gert Van Hoof • Diederik Schowanek •
Helen Franceschini • Ivan Muñoz

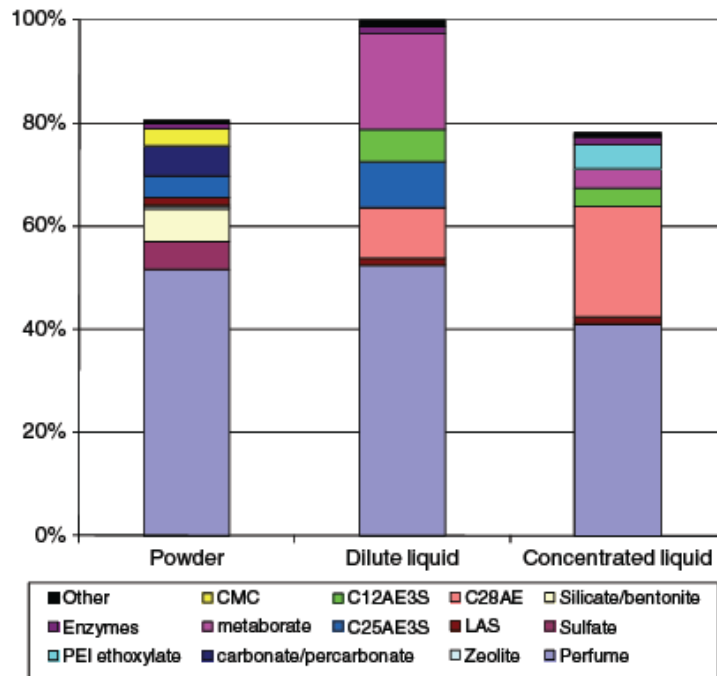


Fig. 2 Comparison of three GFF using the critical dilution volume. Results are for one wash relative to dilute liquid

CDV

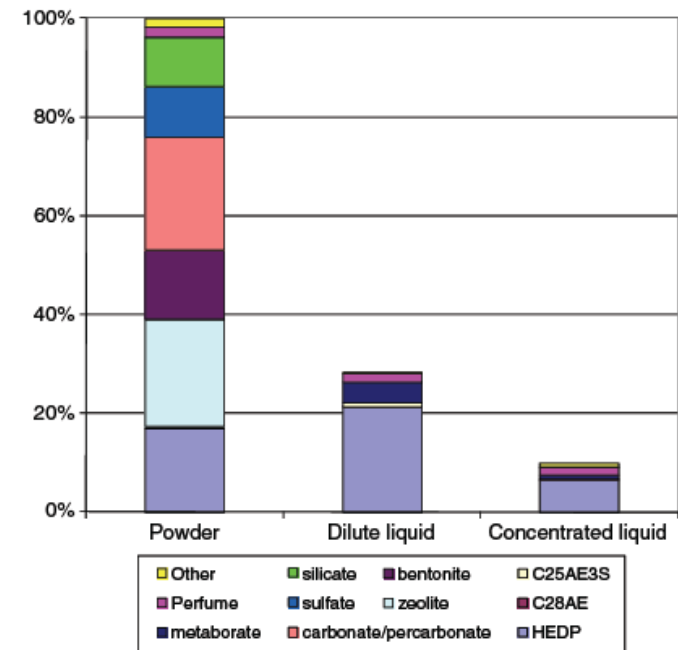


Fig. 4 Comparison of three GFF using the freshwater ecotoxicity characterization factors from USEtox. Results are for one wash relative to powder

USEtox



P&G Consumer Research Capability



- General expertise in qualitative and quantitative consumer research (e.g. focus groups, in-home visits, supermarket interviews, concept & use tests, on-line panels in different countries and geographies, etc.)
- Know-how on the most cost-effective ways to perform consumer research
- Brand sustainability initiatives have been shown to be able to drive behavioural changes
- A lot remains to be learned: PEF project should make use of consumer reactions towards quantitative environmental information from the Grenelle Experimentation



Thank You!



Contacts: schowaneck.d@pg.com; stalmans.m@pg.com