
Pet Food Division



How eco-conception can allow pet food manufacturers and suppliers to be actors of climate change through innovation

Agenda



01

Introduction & Climate Change,
governments' pledges

02

What does it mean for actors of the
pet food Industry

03

Eco-design: Methodology

04

Eco-design: Examples

05

Conclusion



Text boxes

Introduction

The future of pet food industry?



"Sustainable development

is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs."



United Nations
1987

Climate Change

The major risk for our society

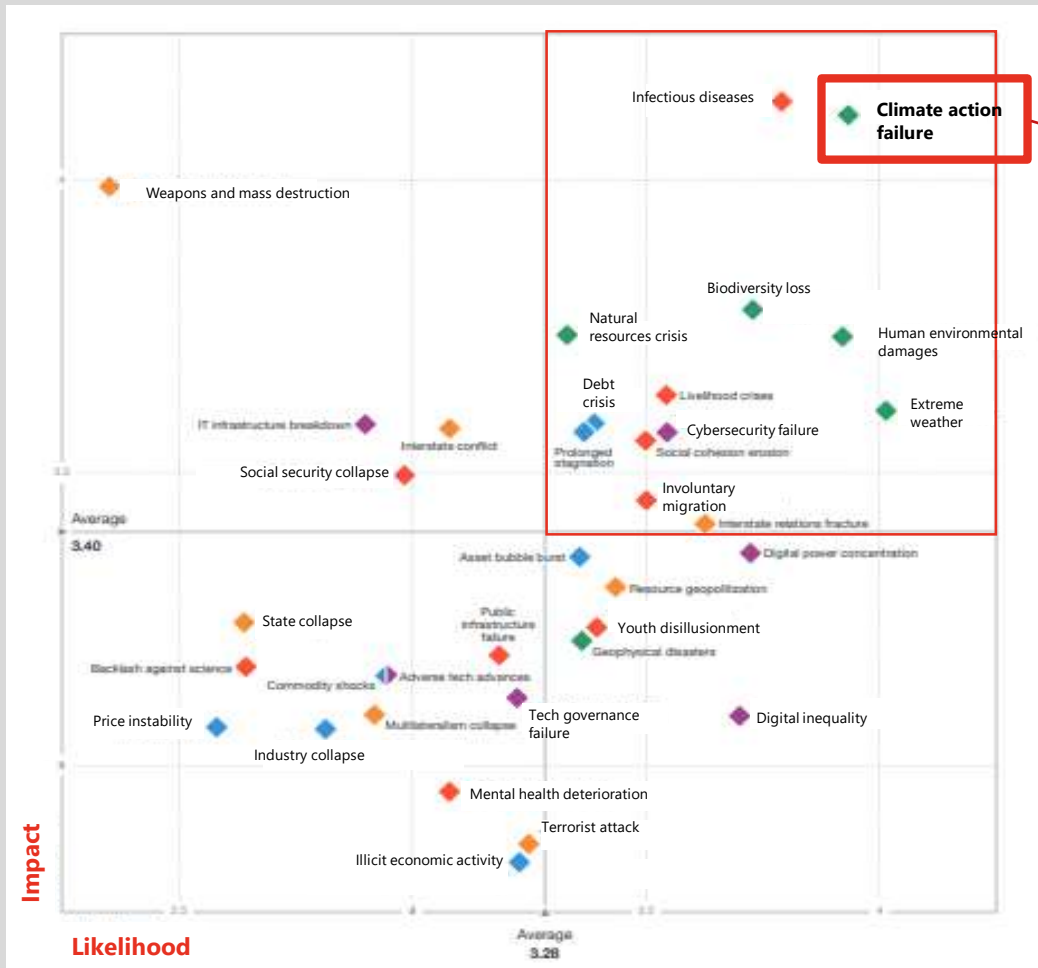




Climate change

The biggest environmental risk

GLOBAL RISK LANDSCAPE



How do respondents perceive the impact ↑ and likelihood → of global risks ?



Climate action failure

Failure of governments and businesses to enforce, enact or invest in effective climate-change adaptation and mitigation measures, preserve ecosystems, protect populations and transition to a carbon-neutral economy

12

risks that are more likely to happen with high consequences



5 are direct Environmental Risks



5 are social consequences of Climate-change failure

Source: The Global Risks Report 2021 World Economic Forum Global Risks Perception Survey 2020

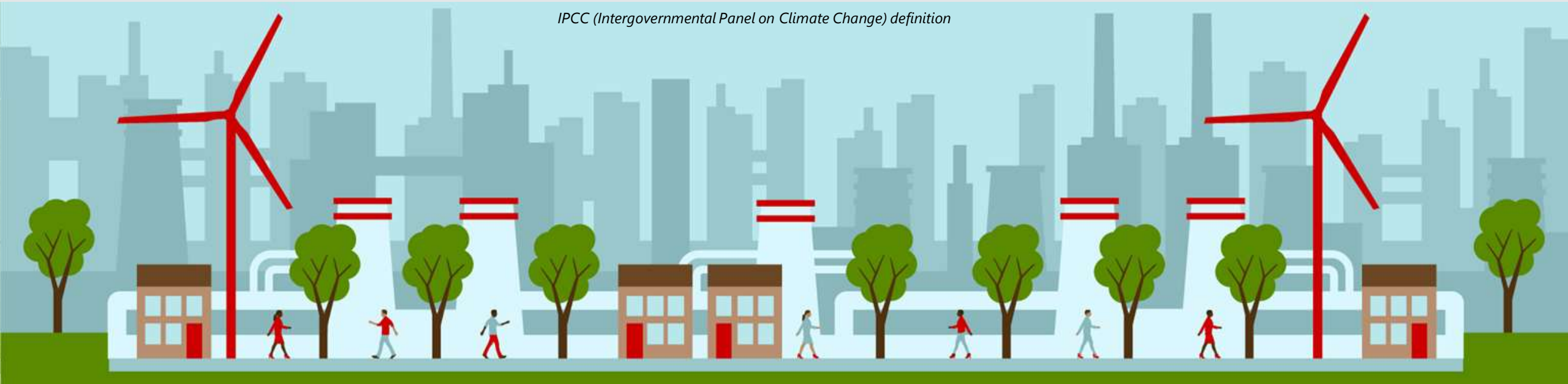
Climate change

Definition



“Climate change refers to a **change in the state of the Climate** that can be identified (e.g., by using statistical tests) by changes in the **mean** (i.e average) and/or the **variability of its properties** and that persists for an **extended period**, typically decades or longer.”

IPCC (Intergovernmental Panel on Climate Change) definition



Two origins of climate change



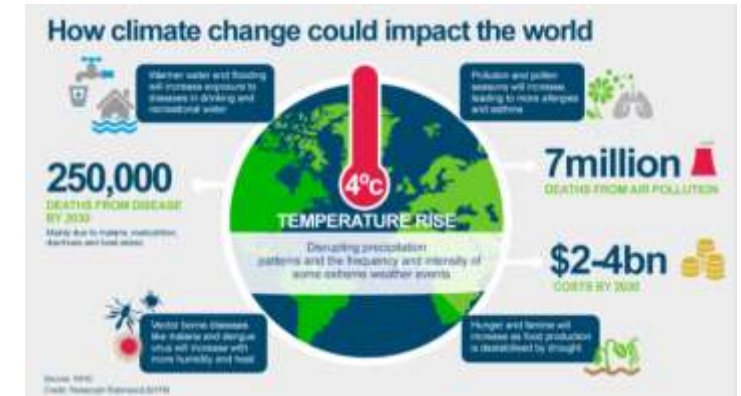
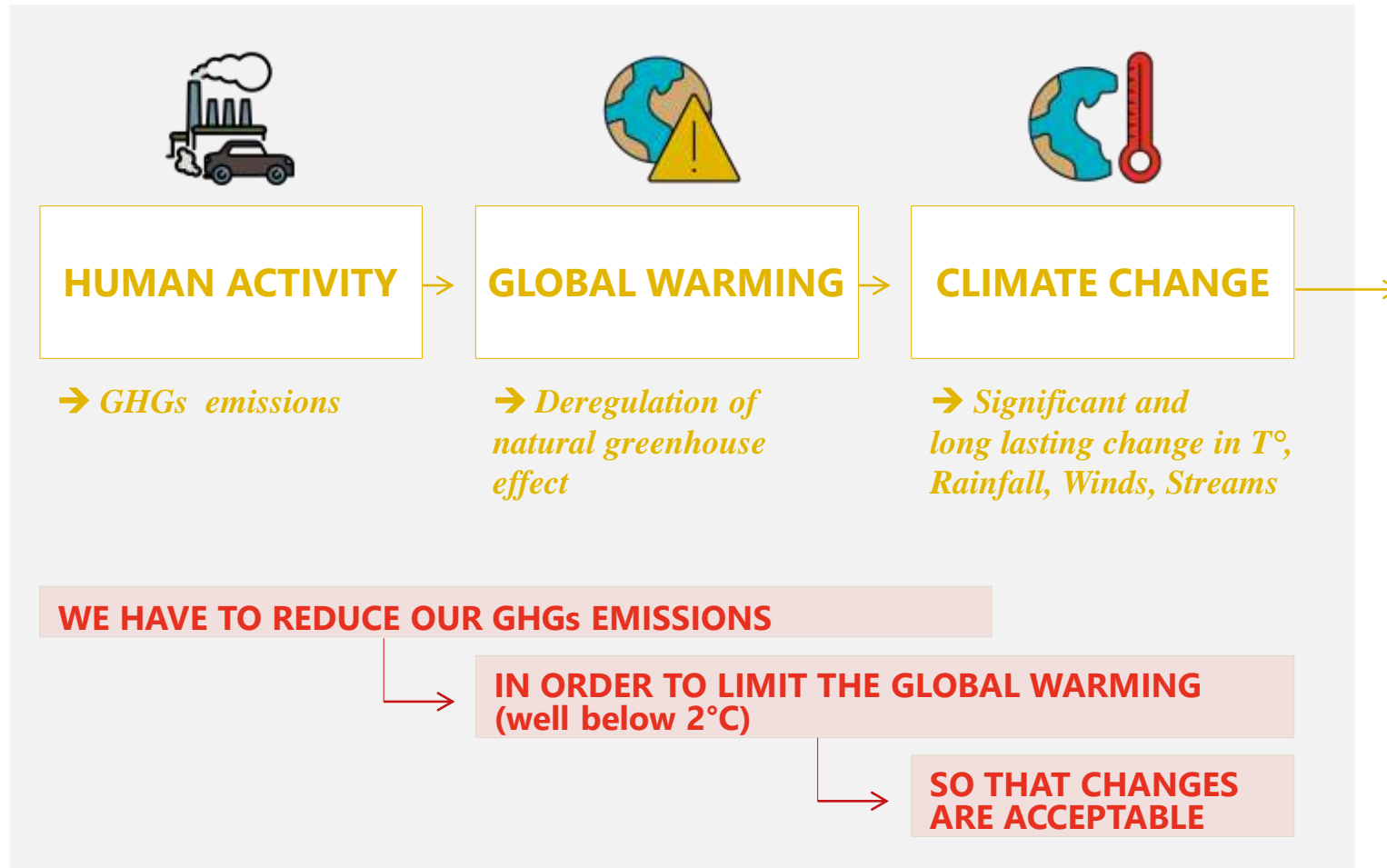
Natural changes
e.g. solar cycles, volcanic eruptions, etc.



Anthropogenic changes
man made changes

Climate change

Causes and consequences



IRREVERSIBLE CHANGES

- Landscapes
- Agriculture (Crops yields...)
- Finance (Costs)
- Water management
- Food (& pet food) Chain management
- People migration and economic changes
- Health for people and pets

So, how to act?



Source: Mintel Survey – 500 respondents – March 2021

WE HAVE TO REDUCE OUR GHGs EMISSIONS



Who is most responsible for Sustainability issues?

48% COMPANIES

28% GOVERNMENTS

20% CONSUMERS THEMSELVES

Measures to combat climate change

Globally



PARIS AGREEMENT

- international UN treaty
- adopted on December 12, 2015
- signed by 196 countries representing 96% of total GHGs emissions

Aim:

TO LIMIT GLOBAL TEMPERATURE WELL BELOW 2°C WITHIN 2100:

- Limiting emissions with transition economy to reach net ZERO emissions by 2050
- Ensuring adaptative measures and financing



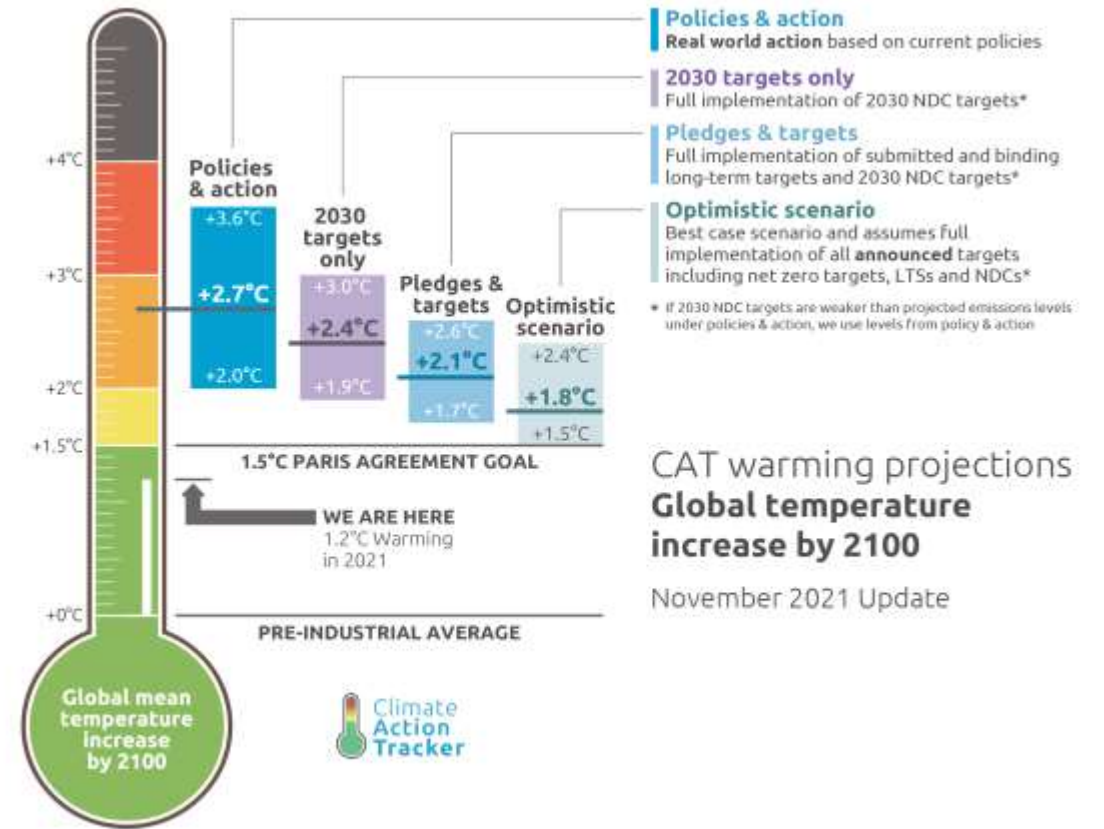
Climate change

Tracking and Targets evaluation



→ The Climate Action Tracker is an independent scientific analysis that tracks government climate action and measures it against the globally agreed Paris Agreement aim of "holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C."

→ CAT tracks 39 countries and the EU covering around 85% of global emissions. 140 countries have set Pledges & targets. In 2021, some countries revised more ambitious targets, other did not change



Climate change

CAT evaluation of targets in 2021

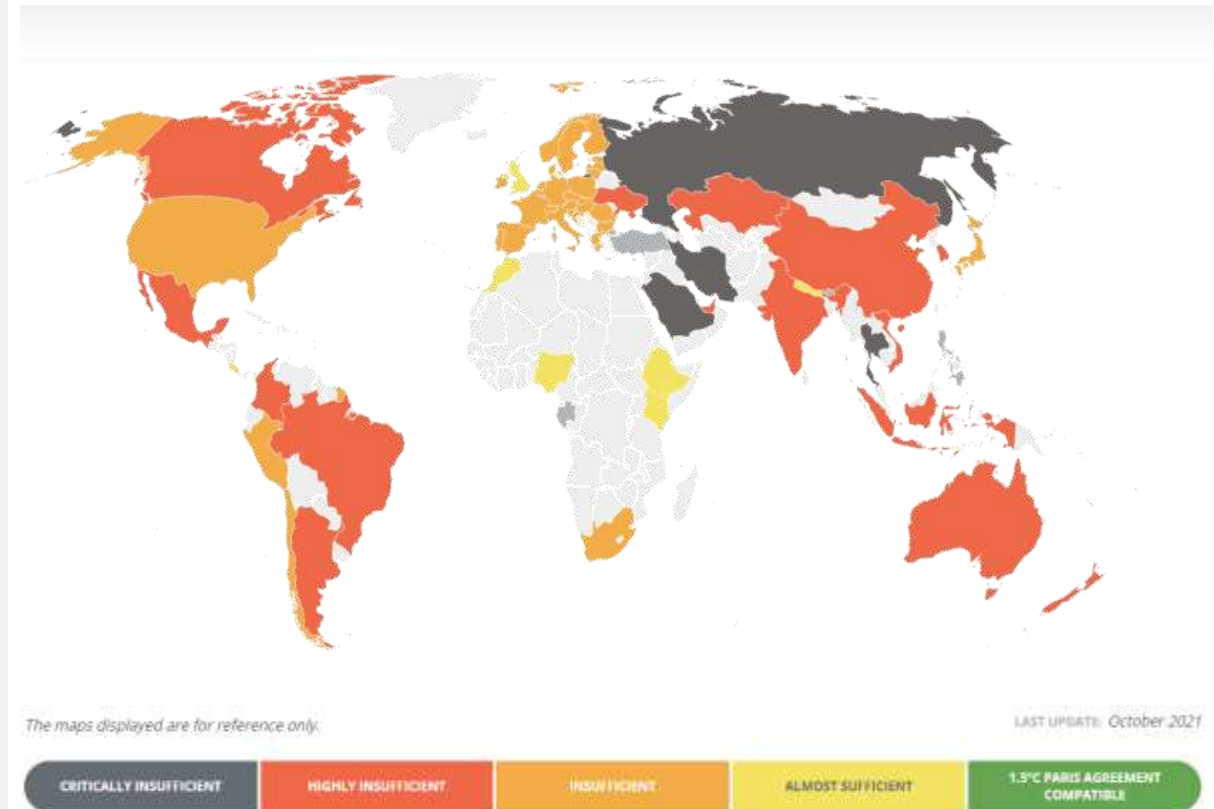


FAIR SHARE TARGETS:

Fair contribution to Global effort, i.e targets including 2 éléments:

→ NDC = National determined contributions reflecting own efforts to provide with mitigation actions, sectorial decisions and regulation implementations

→ Financing actions abroad, for the poorest and according to history of emissions and country richness



GHGs

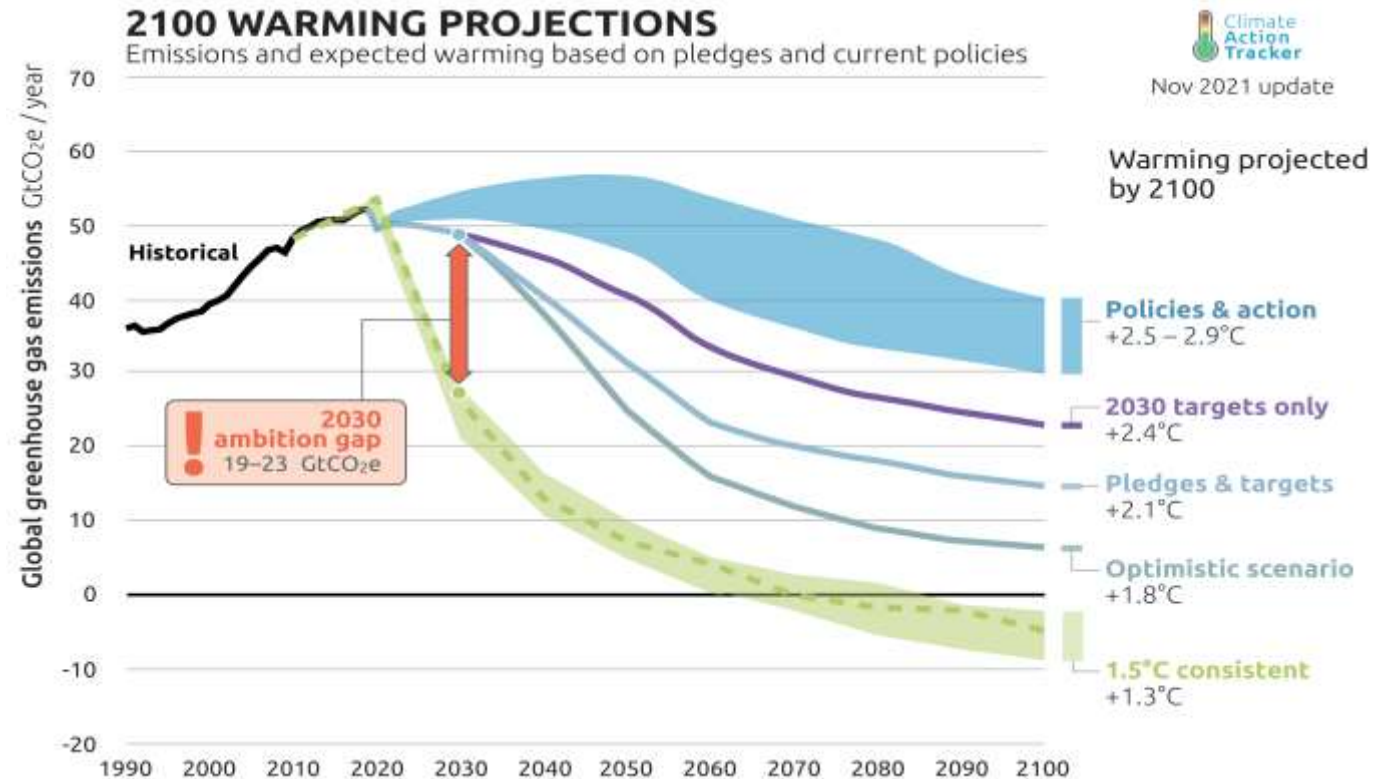
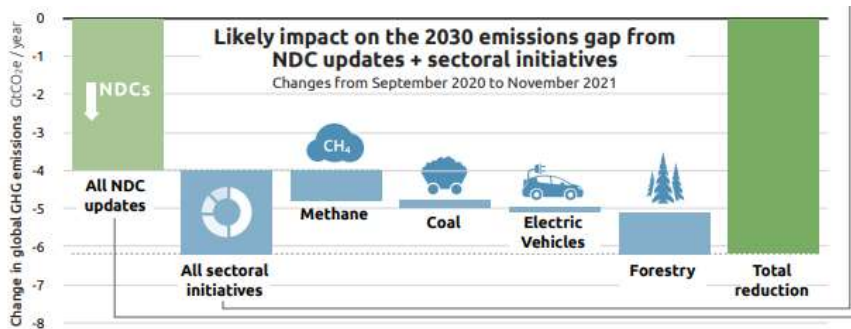
The COP 26



New NDCs and sectorial announcements
 → -25% of the 2030 Carbon Gap
 More finances to developing countries

Sectorial announces




- Methane
- Coal
- Electric vehicles
- Forestry



Pledges of governments

Examples on France, USA and Brasil









Region	Country	Pledges	AIM	GHG Emissions Reduction Level	Compared to	Commitments
EMEA		YES	Carbon neutrality by 2050	2030: - 55% In low and Transition Act	1990 or 2012	<ul style="list-style-type: none"> → Sets carbon budgets, emission caps not to be exceeded per period of five years until 2033. → Guidelines for transition to a low carbon economy in all sectors with targets (Ex: energy: 35% renewable in 2030, Nuclear > 50% in 2025, -40% in transport GHGs in 2030)
NAM		YES	April 2021 New NDC	2030: -50-52%	2005	<ul style="list-style-type: none"> → 100% carbon pollution-free electricity by 2035 → 95%-100% of sales of new light-duty vehicles in the US should be zero-emissions at national level by 2030. → To reduce the carbon footprint of the US buildings sector by 50% by 2035.
LATAM		YES	To reach Carbon Neutrality by 2050 (yet to be updated as law)	Nov 2021 engaged in changing their target 2025 -37%, & 2030: -43% to -50%	2005	<ul style="list-style-type: none"> → Accelerating the GHGs reduction → Reverse current direction: ¾ of GHGs emissions are due to Agriculture, land change and forestry

Evaluation of the actions

Evaluation from the COP 26



State of Climate Action 2021: Progress Towards 2030 Benchmarks

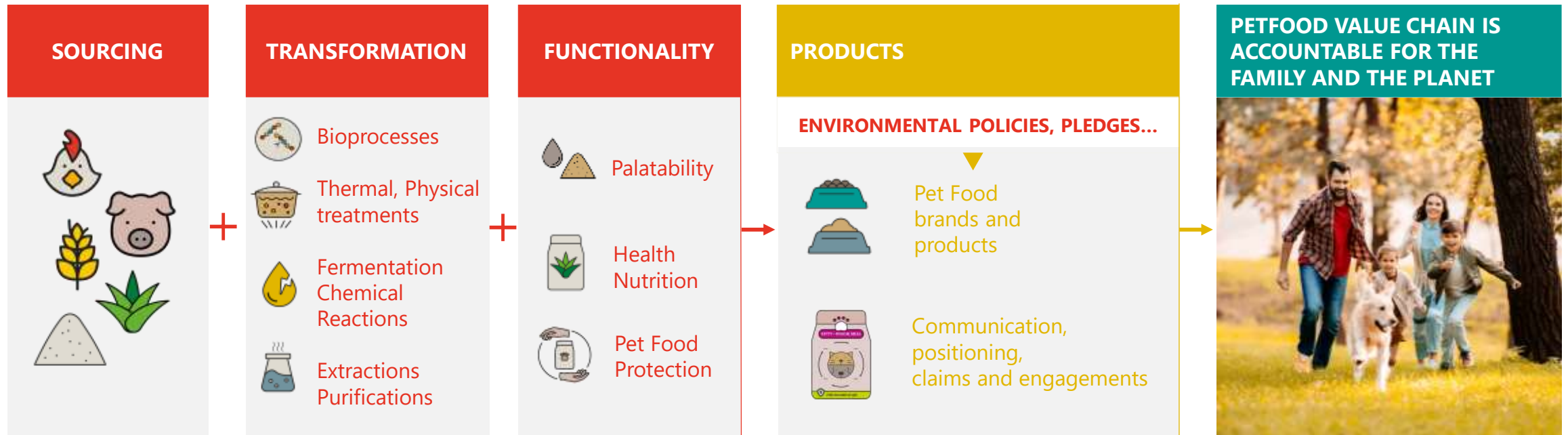
<p> ON TRACK: Change is occurring at or above the pace required to achieve the 2030 targets</p> <p>None</p>	<p> WELL OFF TRACK: Change is heading in the right direction, but well below the required pace</p> <ul style="list-style-type: none"> ● Share of unabated coal in electricity generation ● Carbon intensity of electricity generation ● Energy intensity of building operations ● Low-carbon steel facilities in operation ● Green hydrogen production ● Share of electric vehicles in the light duty vehicle fleet ● Share of battery and fuel cell electric vehicles in medium- and heavy-duty vehicles sales ● Share of low-emissions fuels in the transport sector 	<p> INSUFFICIENT DATA: Data are insufficient to assess the gap in action required for 2030</p> <ul style="list-style-type: none"> ● Retrofitting rate of buildings ● Carbon intensity of building operations ● Carbon intensity of land-based transport ● Peatlands conversion rate ● Peatlands restoration ● Coastal wetlands conversion rate ● Share of food production lost ● Food waste ● Corporate climate risk disclosure
<p> OFF TRACK: Change is heading in the right direction at a promising, but insufficient pace</p> <ul style="list-style-type: none"> ● Share of renewables in electricity generation ● Share of electricity in the industry sector's final energy demand ● Share of electric vehicles in light duty vehicle sales ● Share of battery and fuel cell electric vehicles in bus sales ● Crop yields ● Ruminant meat productivity ● Ruminant meat consumption in the Americas, Europe, and Oceania ● Total public financing for fossil fuels 	<p> STAGNANT: Change is stagnating, and a step change in action is needed</p> <ul style="list-style-type: none"> ● Carbon intensity of global cement production ● Carbon intensity of global steel production ● Share of global emissions covered by a carbon price of at least \$135/tCO₂e 	<p> WRONG DIRECTION: Change is heading in the wrong direction, and a U-turn is needed</p> <ul style="list-style-type: none"> ● Share of sustainable aviation fuel in global aviation fuel supply ● Share of zero-emissions fuel in international shipping fuel supply ● Rate of technological carbon removal rate ● Reforestation ● Rate of carbon removal from reforestation ● Coastal wetlands restoration ● Total climate finance ● Public climate finance ● Private climate finance ● Share of trips made by private light duty vehicles ● Deforestation rate ● Agricultural production GHG emissions

To learn more, read the [State of Climate Action 2021 report](#)

What does it mean for us?

Petfood Industry Actors must run their business responsibly

Pet food industry business value chain



How to address the market challenges through the portfolio?



ADDRESS CHALLENGES FOR THE PET FOOD INDUSTRY



Feed a growing pet population, everywhere and longer, with sometimes not expandable resources



Answer pet parents expectations for naturalness, ethic & transparency



Deal with increasing regulatory & health constraints related to products exportation

WITH AN ACCURATE PORTFOLIO



Pet food Industry must provide the market with solutions that:



have a sustainable sourcing

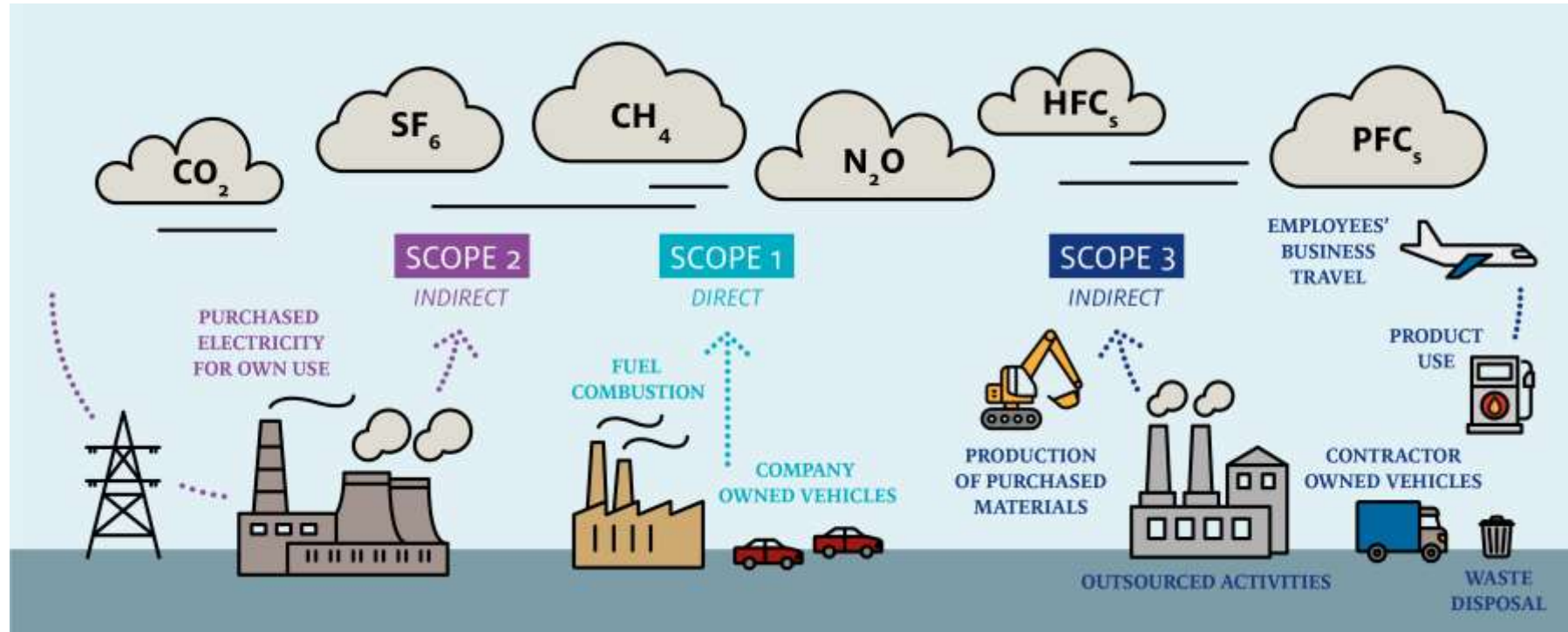


are safe and responsibly nutritious



generate long-term value

How to assess carbon footprint?



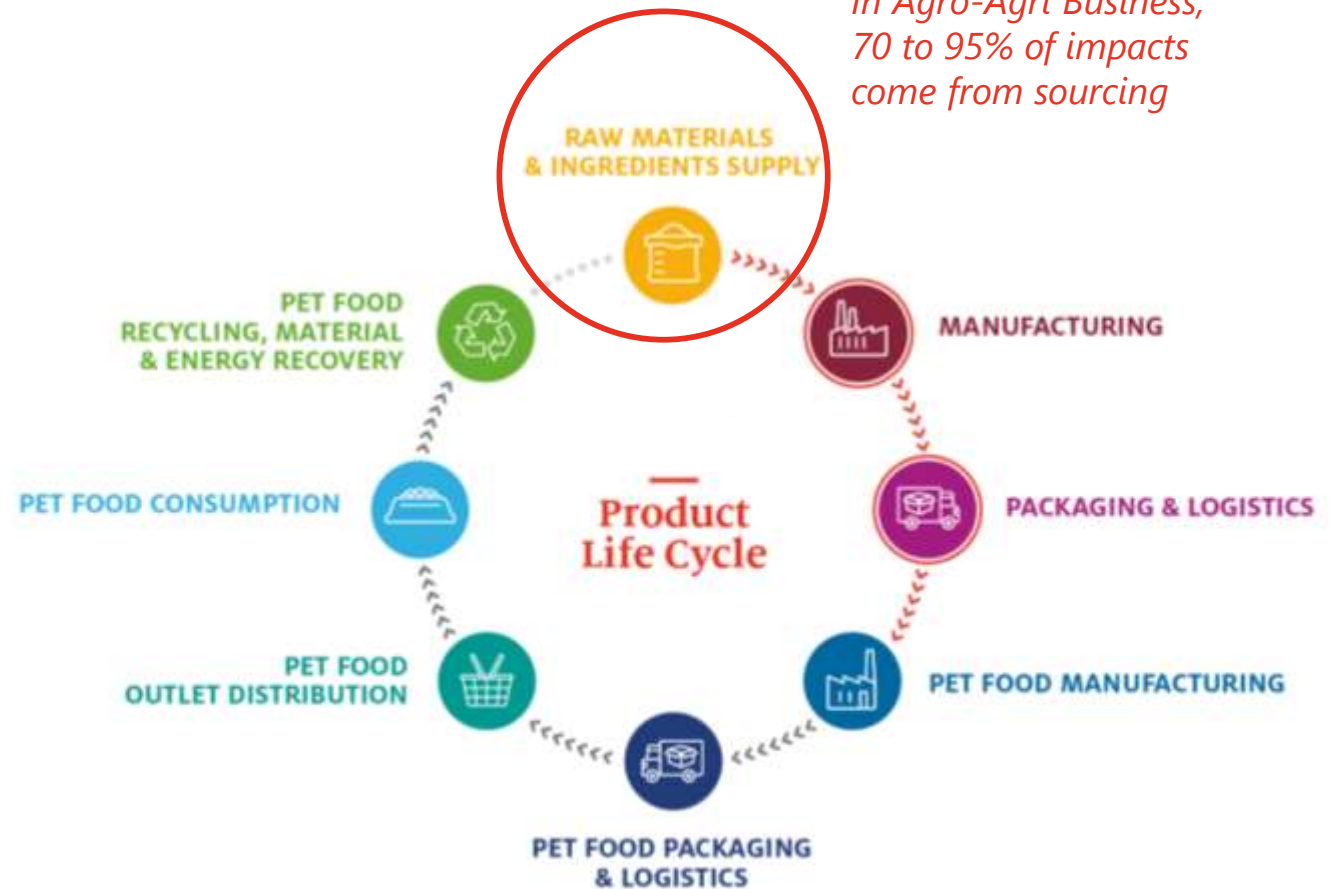
- **CARBON EMISSIONS FACTORS ARE CALCULATED / Qty of MANUFACTURED PRODUCT**
 - **SCOPE 3 OF A PLAYER IS THE TOTAL SCOPE OF ITS SUPPLY CHAIN**

Circular thinking, a responsible approach for the Product Footprint Measurement



FROM CRADLE TO GRAVE

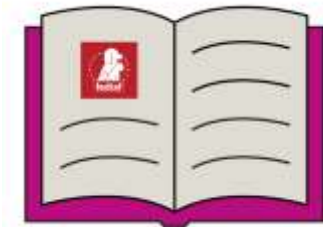
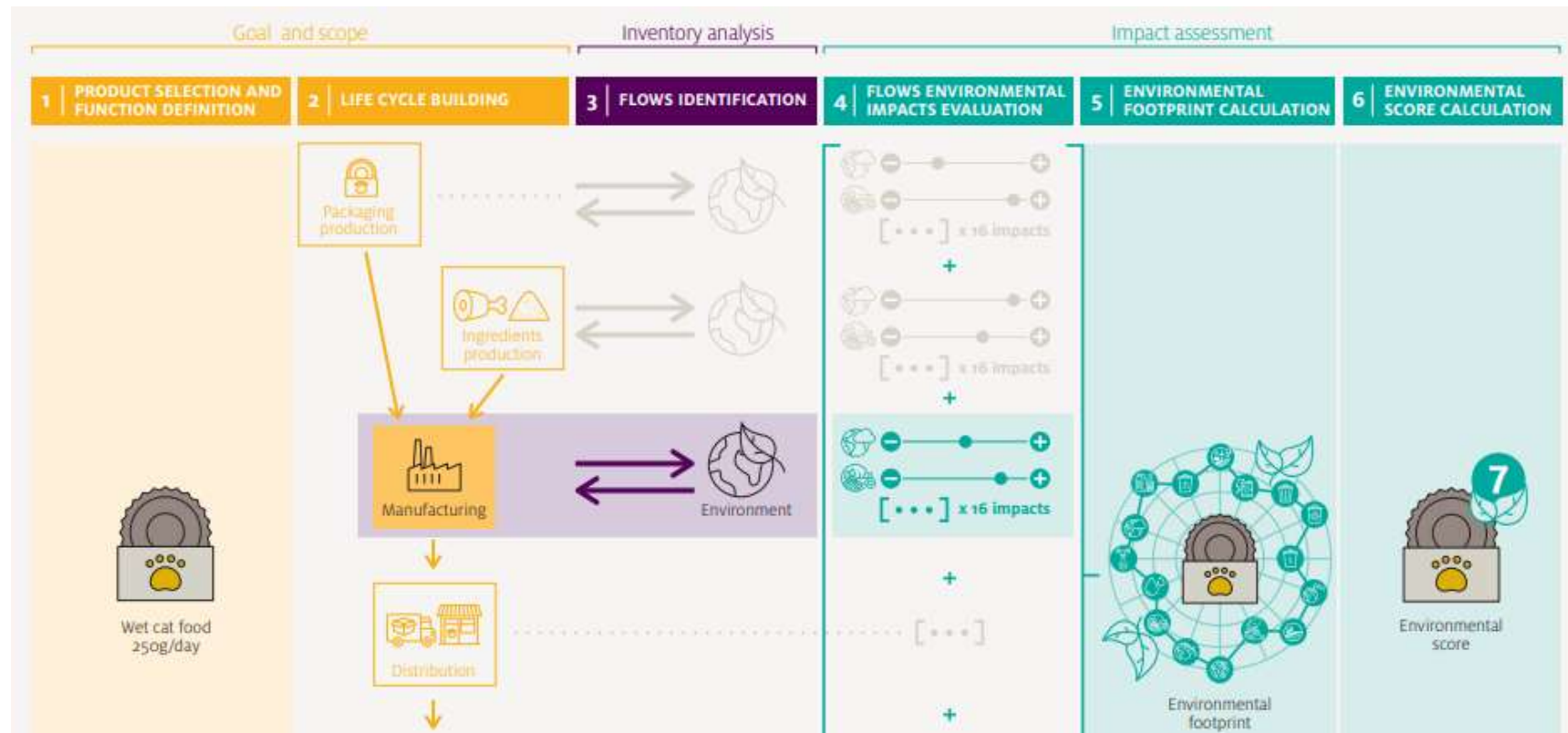
Each step counts and has to be considered in term of impact between the activity and the environment



LCA: The Method for Footprint Evaluation



A LIFE CYCLE ASSESSMENT AIMS TO EVALUATE THE ENVIRONMENTAL IMPACTS OF A PRODUCT OR A SERVICE. THIS IS A NORMALIZED METHOD, DESCRIBED IN THE ISO 14040 AND ISO 14044 NORMS.



2018

Product Environmental Footprint Category Rules Guidance



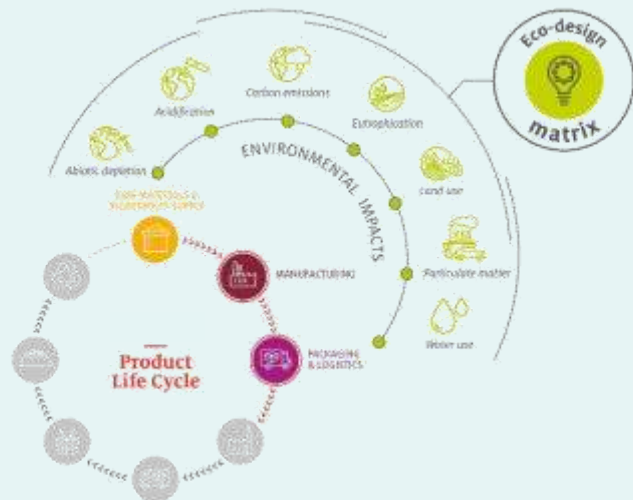
Addressing climate change

Reducing Carbon Footprint through the offer



A SUSTAINABLE PORTFOLIO

ECO-DESIGNED PRODUCTS



ECO-DESIGNED MATRIX

Strong Methodology: EU PEFCR, ISO14040-14044

Eco conception is about designing products with special consideration for the environmental impacts of the product during its whole lifecycle.

ADDING A NEW CRITERIA TO THE PRODUCT DEVELOPMENT SPECIFICATIONS...

- Performance level
- Price positioning
- Claims
- Raw material availability
- Environmental Impact **NEW**

ECO-DESIGN

The responsible offer



Key steps of eco-design

From conception to market



WE NEEDED A TOOL TO MEASURE AND IMPROVE PRODUCT FOOTPRINT



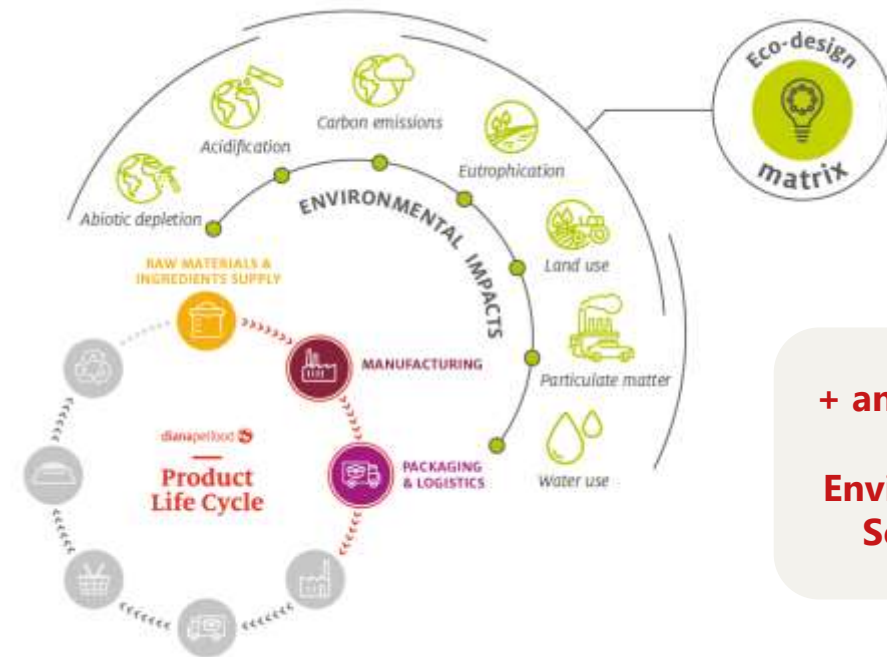
Diana Pet Food eco-design matrix

A unique tool to provide eco-designed products



It assesses and allows to improve the environmental impacts of products throughout their life cycle, from sourcing to customer delivery.

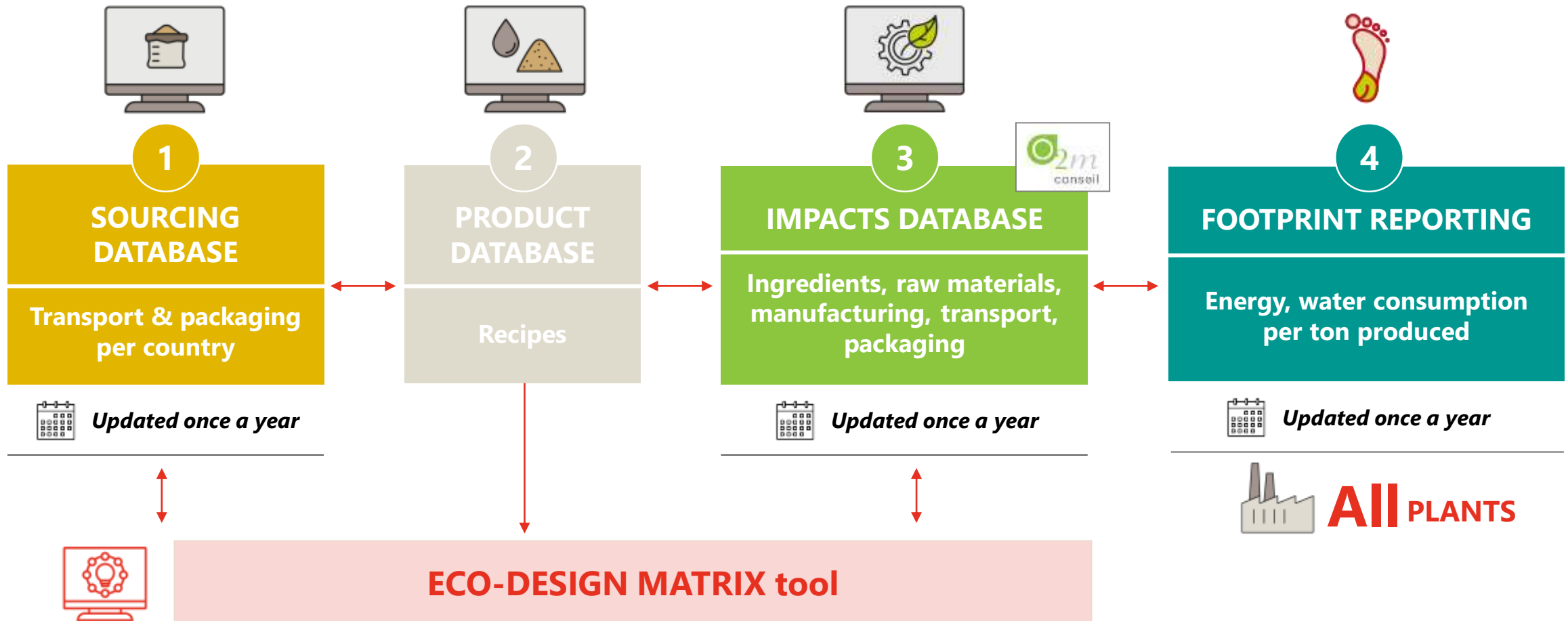
Focusing on the 7 environmental impacts at 4 life steps we can act on... in all countries we operate



+ an aggregated Score=
Environmental Score (ES)

How to give robustness to the score

With solid databases



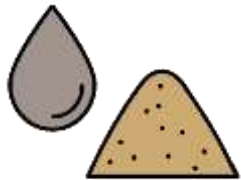
Eco-design matrix

A way to improve purchase and sales portfolios



1. RAW MATERIALS & INGREDIENTS

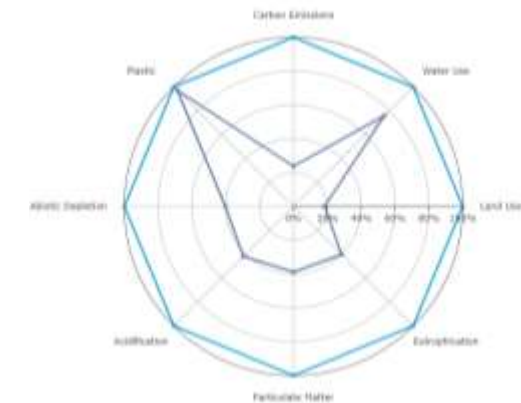
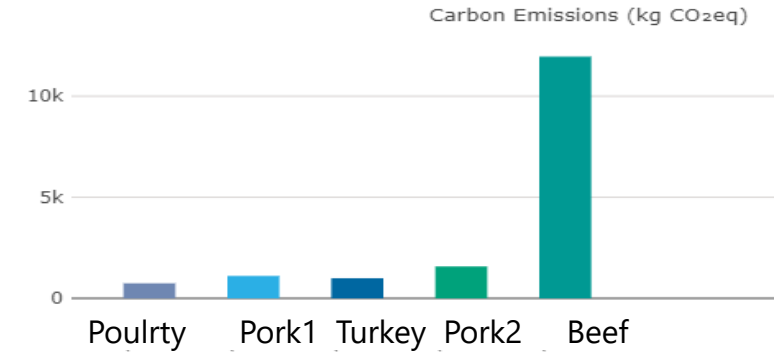
→ Simulate and compare (up to 10) their environmental impacts for a targeted functionality



2. PRODUCTS

- Get automatic Score of any product worldwide
- Visualize where the impacts are coming from
- Create more environmental friendly product: ECO DESIGN
- Visualize, measure & compare the adjustments

Comparison of CO₂eq /kg of different RM



Product A - Product A eco-designed

Eco-Designed Example 1

Liquid switch

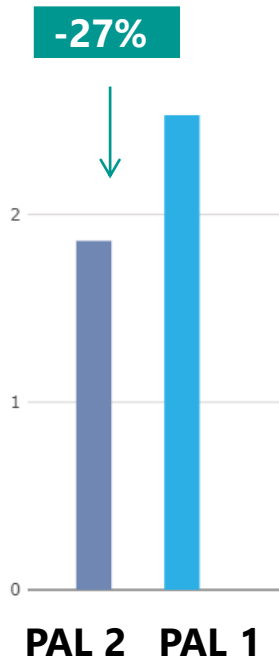


Product Switch

Example of a DOG Liquid palatant



PRODUCT ENV. SCORES



PAL1 IS THE ORIGINAL DOG Super PREMIUM LIQUID



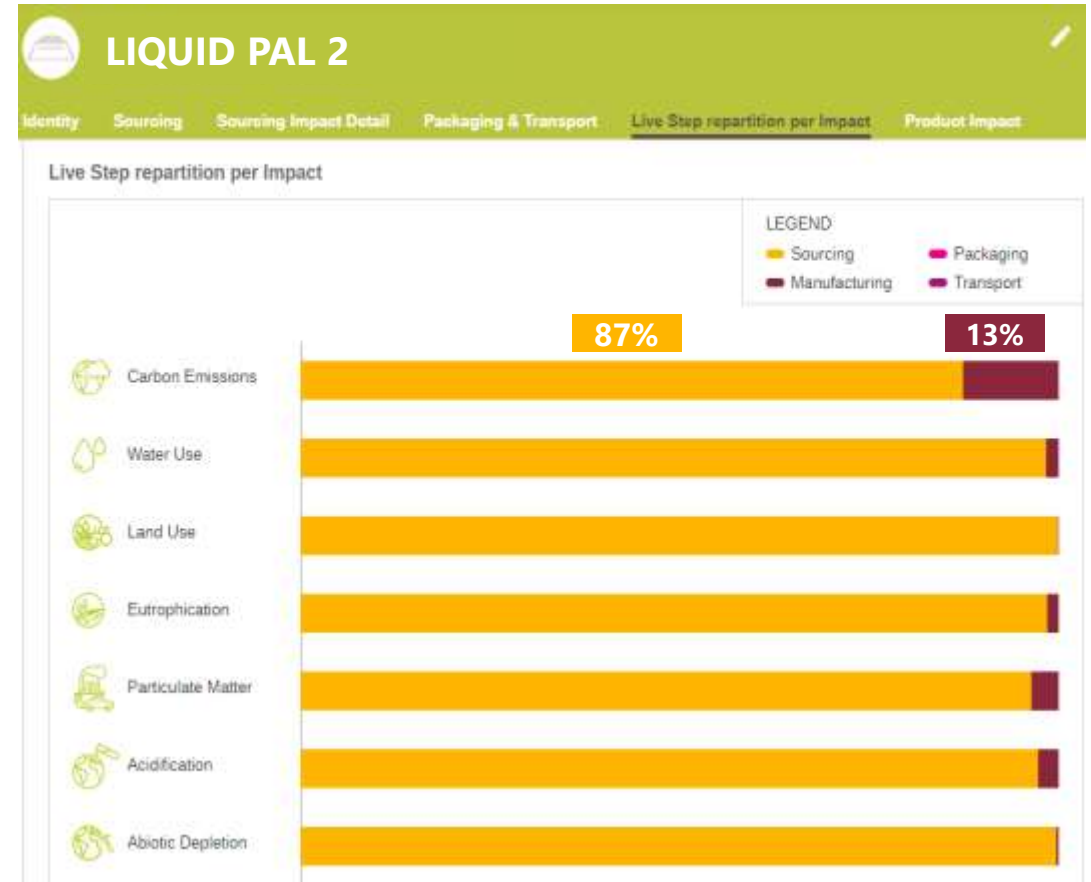
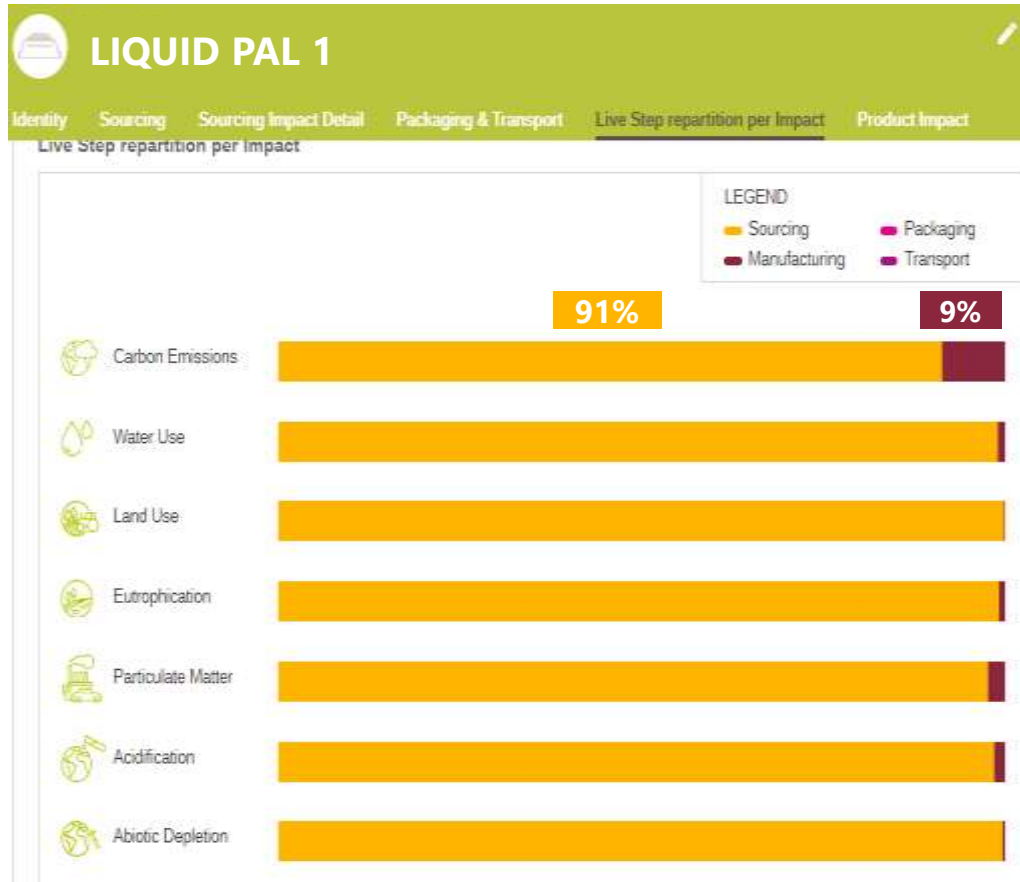
PAL2 IS THE REFORMULATED formula – SAME PALATABILITY

Values /Ton of finished product (Bulk)

Palatant	Score	Carbon Emissions (kg CO ₂ eq)	Water Use (m ³)	Land Use (m ²)	Eutrophication (molc N eq)	Particulate Matter (kg PM2.5 eq)	Acidification (molc H ⁺ eq)	Abiotic Depletion (kg Sb eq)
PAL 2	1.86	925.78	1666.30	448.44	34.32	0.6503	10.13	0.1301
PAL 1	2.53	1350.31	2999.05	622.44	62.27	1.06	17.71	0.1289

Product Switch

Example of a Powder palatant

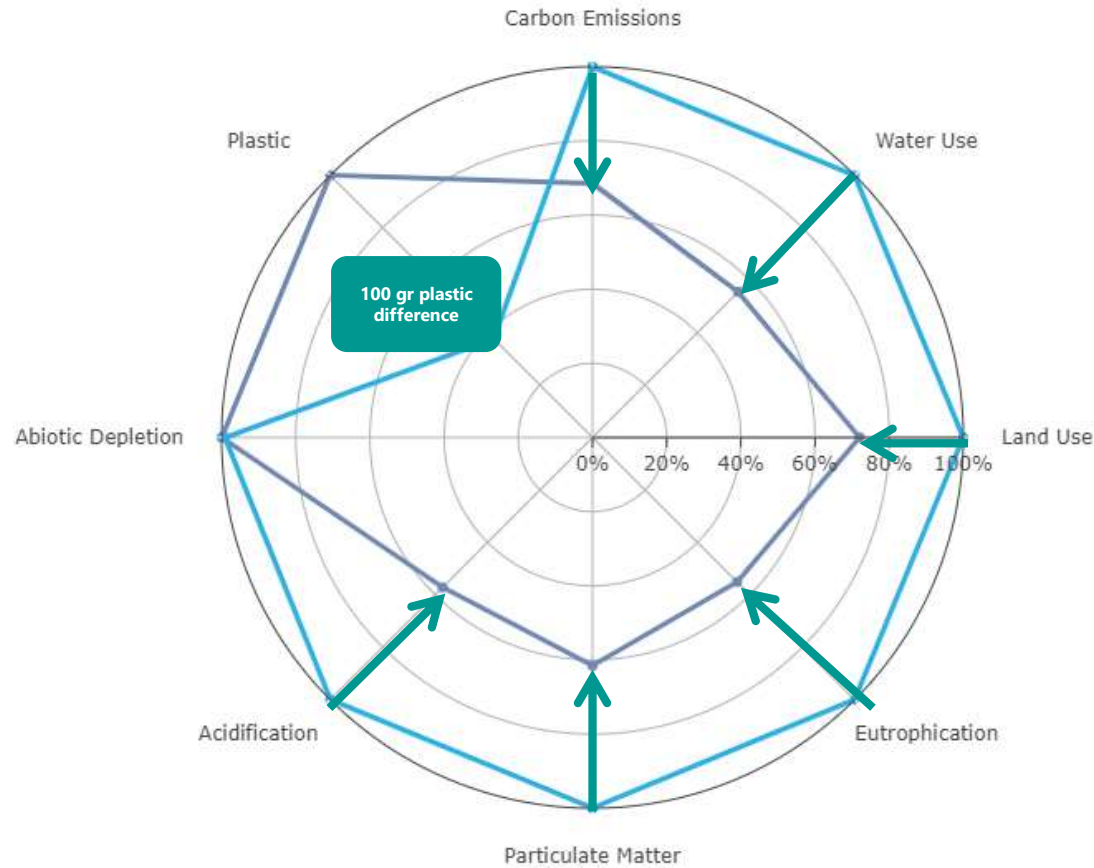
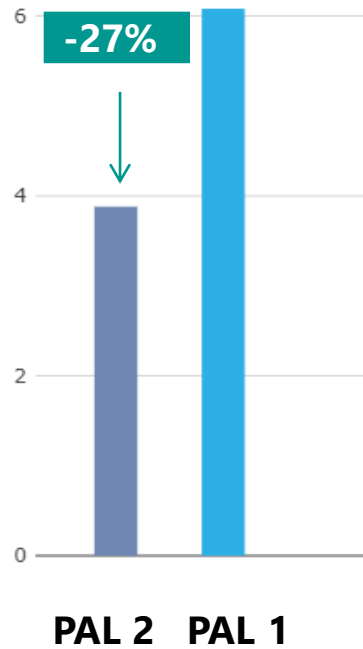


Product Switch

Example of a Powder palatant



PRODUCT ENV. SCORES



PRODUCT SWITCH ALLOWS TO REDUCE

- -31% CO2 eq
- -44% water use
- -28% Land Use
- -45% Eutrophication
- -39% particulate matter
- -43% Acidification

Eco-Designed Example 2

Powder switch

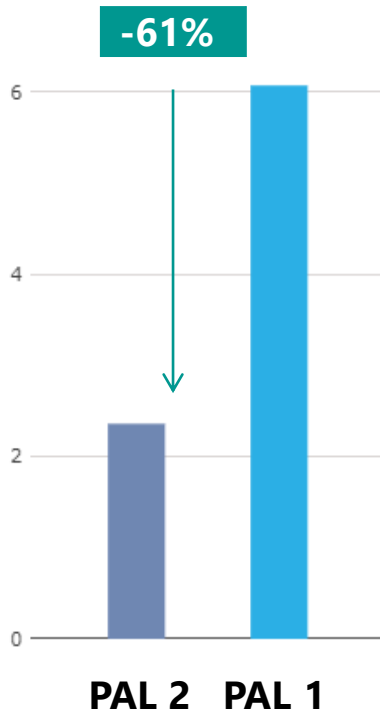


Product Switch

Example of a DOG Liquid palatant



PRODUCT ENV. SCORES



PAL1 IS THE ORIGINAL DOG PREMIUM POWDER



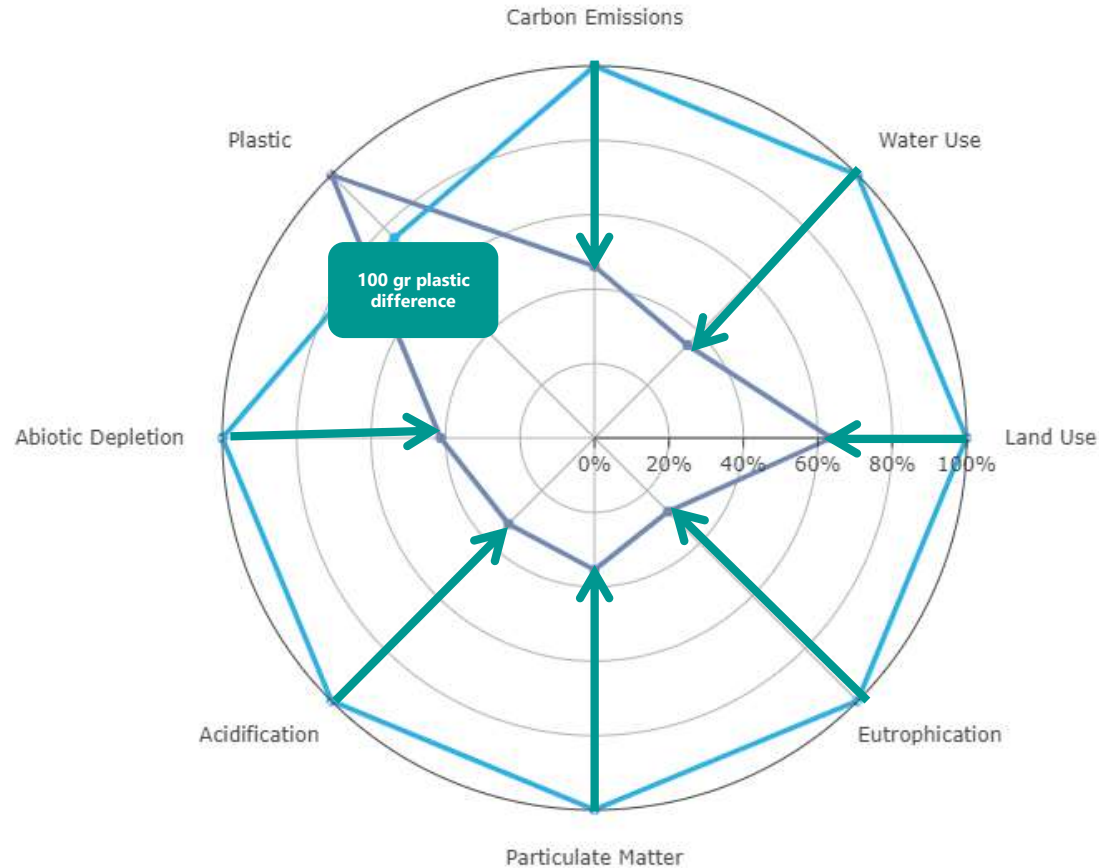
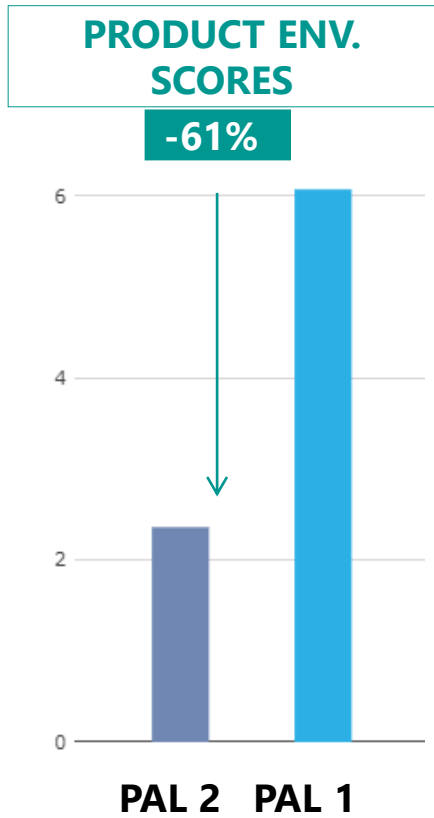
PAL2 IS A MEAT FREE DOG PREMIUM POWDER – SAME PAL' LEVEL

Values /Ton of finished product (in Big Bag)

Palatant	Score	Carbon Emissions (kg CO ₂ eq)	Water Use (m ³)	Land Use (m ²)	Eutrophication (molc N eq)	Particulate Matter (kg PM2.5 eq)	Acidification (molc H ⁺ eq)	Abiotic Depletion (kg Sb eq)
PAL 2	2,36	1747,25	1892,61	1193,86	44,00	1,15	14,06	0,11
PAL 1	6,07	3783,79	5358,51	1874,89	157,21	3,25	43,05	0,27

Product Switch

Example of a Powder palatant



**PRODUCT SWITCH
ALLOWS TO REDUCE**

- -64% CO2 eq
- -55% water use
- -36% Land Use
- -72% Eutrophication
- -65% particulate matter
- -67% Acidification
- -59% abiotic depletion

Conclusion



Text boxes

Conclusion

We are part of a value Chain



SUSTAINABILITY within PETFOOD INDUSTRY

- ✓ Each Actor can play the game to address big environmental Stakes
- ✓ Portfolio's Footprint can be improved environmentally
- ✓ Acting Global AND Local is Key
- ✓ We turn from compliant to responsible and differentiated companies, that can attract investors and help building resilient collaborations



Q&A  
Feel free to ask!



Thank you!

Contact me if you have any question, I will be happy to answer!



CSR Manager at Diana Pet Food

Contact Information

Phone: +(33) 678 859 849

E-Mail: aurelie.de-ratuld@symrise.com



Aurélie de Ratuld



symrise

*always
inspiring more*

...