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Module 3
Backgrounds & Arguments
"What backgrounds should I know?"

Module 3.5
Sufficiency

Necessity of sufficiency, implementation proposals and challenges for the "flying" field of action

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TdLab GEOGRAPHIE

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NATIONALE KLIMASCHUTZ INITIATIVE

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Toolbox content

1 **Module 1** Introduction: "Why a Toolbox?"

2 **Module 2** Checklist: "Where do we stand?"

3 **Module 3** Backgrounds & Arguments: "What backgrounds should I know?"

- **3.1** Relevance
- **3.2** Travel reasons
- **3.3** Framework conditions
- **3.4** Success factors & stumbling blocks
- **3.5** Sufficiency

4 **Module 4** Methodology & Tools: "What tools do I have at my disposal?

- **4.1** Project management
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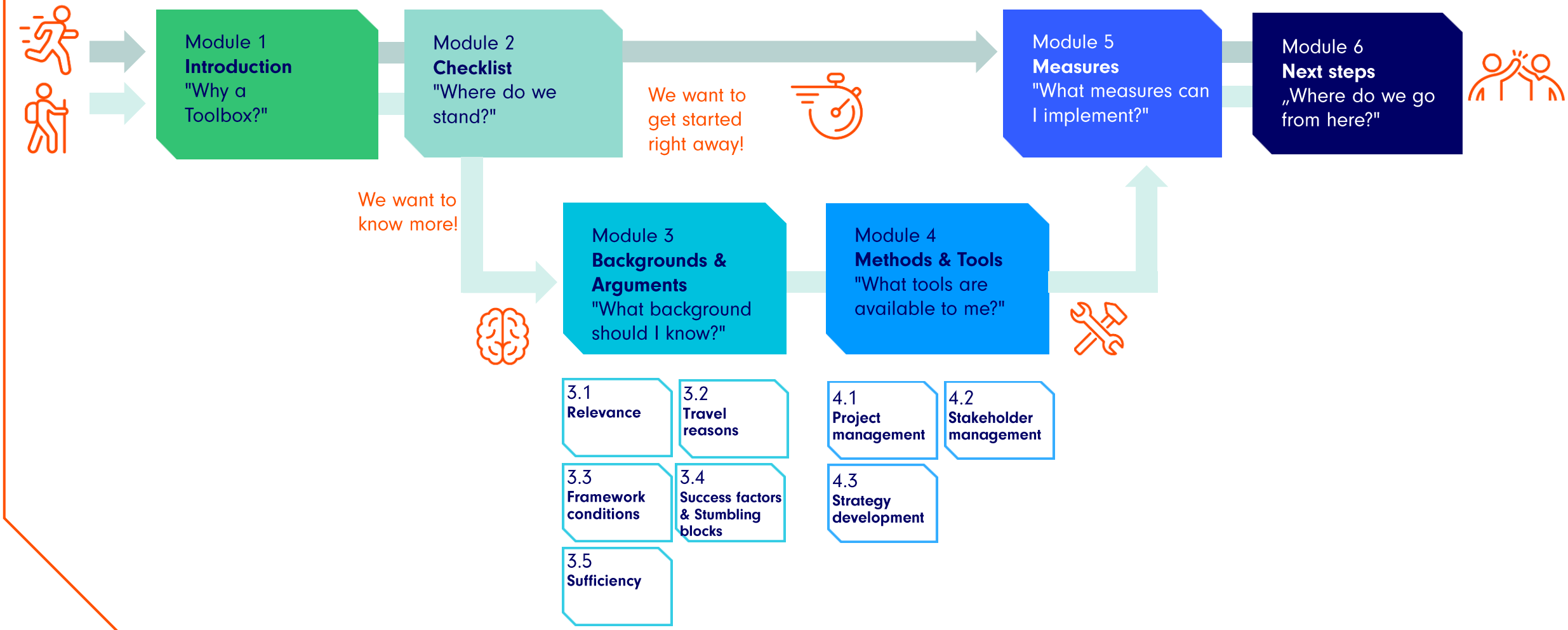
- **4.3** Strategy development

5 **Module 5** Measures: "What measures can I implement?"

6 **Module 6** Next steps: "Where do we go from here?"

Flowchart Toolbox



How to use the toolbox?

The **FlyingLess Toolbox** is a modular collection of content and methods on the topic of reducing air travel.

Depending on the occasion or need, suitable modules or individual modules or individual slides can be selected and used.
The order of the modules is only a recommendation.

Depending on your level of knowledge and interest, you can start with different modules.

The FlyingLess logo and the link to the website (www.flyingless.de) should remain on the slides.

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Module 3.5: Sufficiency

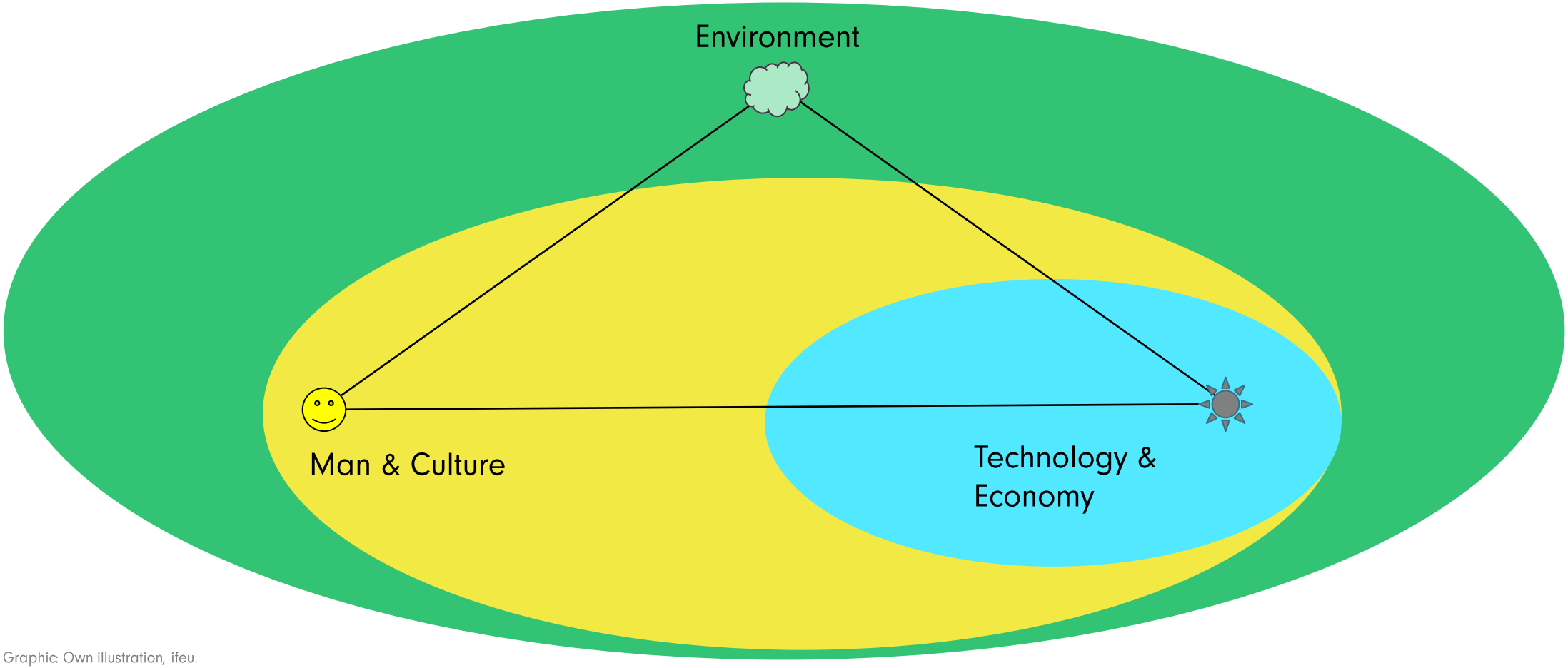
What do I find in this module?

- The need for sufficiency as part of the sustainability strategy
- Basics of the concept and understanding of sufficiency
- Operationalisation of sufficiency in the field of action of flying in science

What can I use this module for?

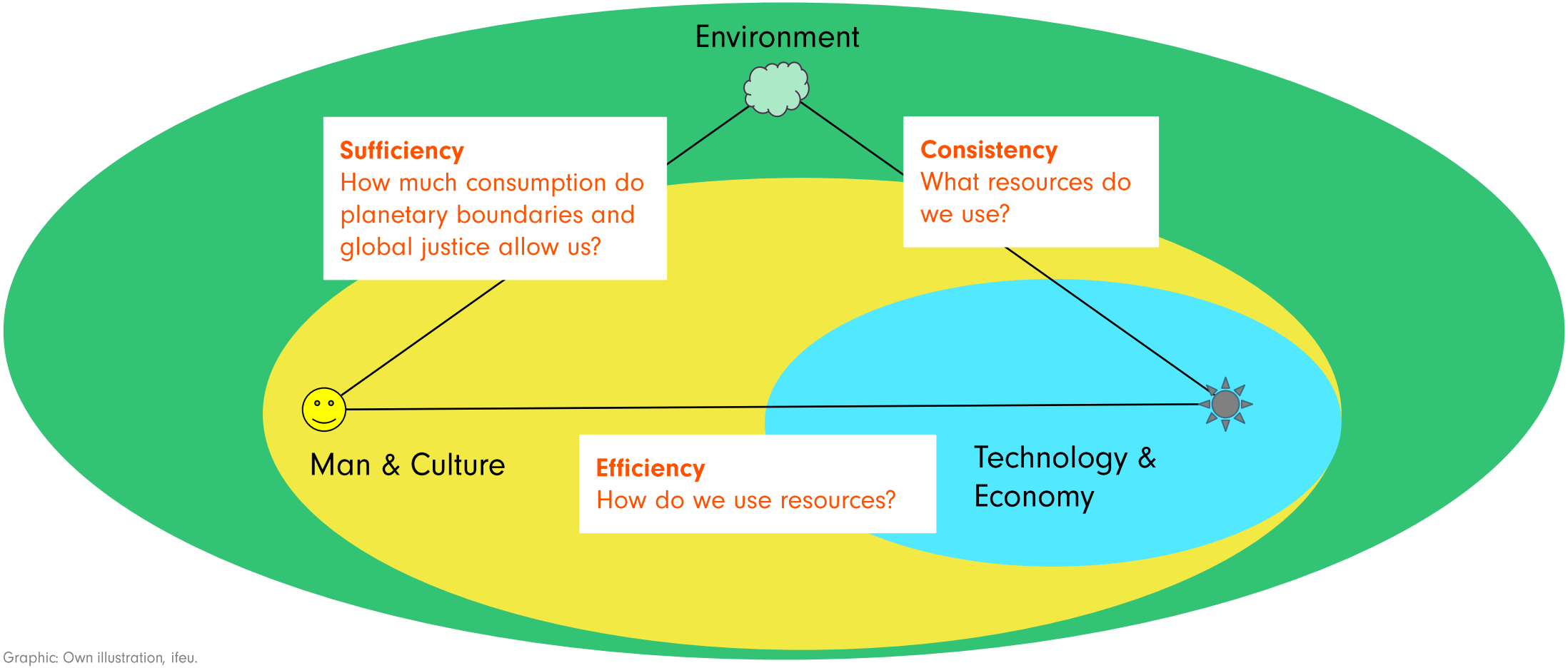
- Get to know the concept and content of sufficiency
- Use scientific justification of the need for reduction as a basis for argumentation
- Suggestions for implementation as a source of inspiration
- Get to know how to systematically exploit reduction potentials

Sustainability
Three dimensions



Graphic: Own illustration, ifeu.

Complementary sustainability strategies:
Sufficiency, efficiency, consistency



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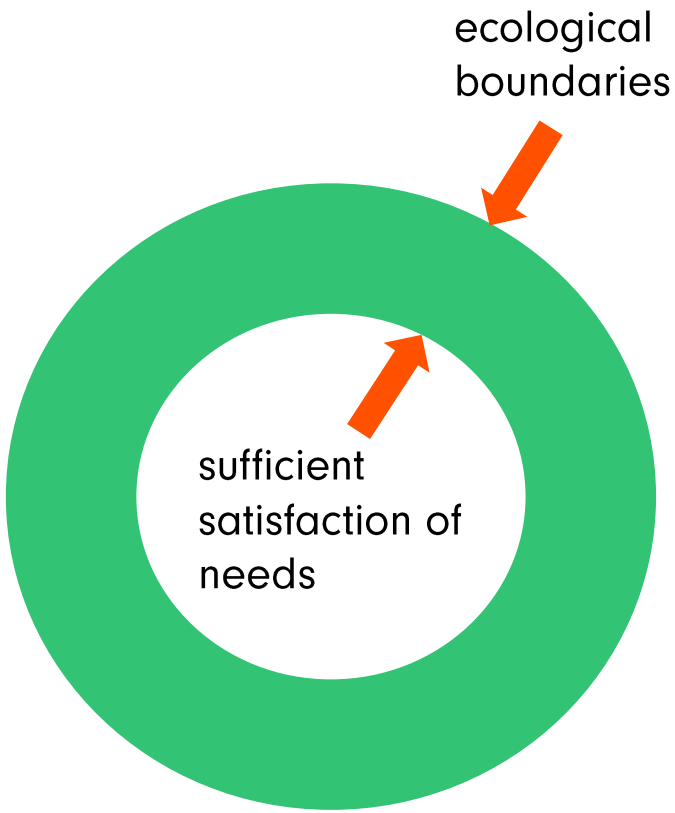
Sufficiency

Definition

- Sufficiency can be a **process** or a **state**
- Sufficiency stands for **behaviours and ways of consumption** or their modification in such a way that they enable sufficient satisfaction of needs within ecological limits (local + global)

  → Sufficiency lifestyles
- Sufficiency means a **shift in the scope of possibilities** for behaviour and satisfaction of needs

  → Change of social-symbolic valuation
- **Policy** must **enable, facilitate and encourage** sufficiency oriented lifestyles and economies through appropriate frameworks



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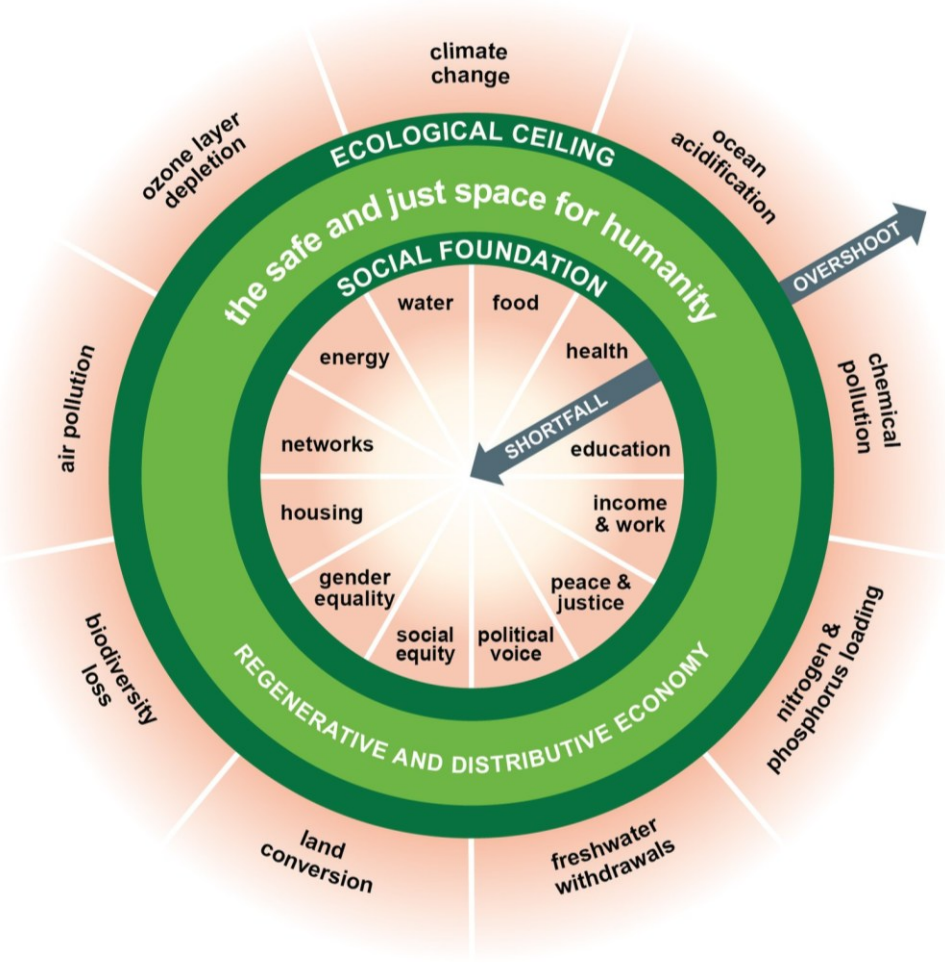
Sufficiency

Neither lack nor excess

- Sufficiency addresses parameters of **absolute limits** at the local and planetary level (ecological ceiling)
- Sufficiency addresses **social goals** (social foundation)

→ Sufficiency requires **examining the cost/benefit ratio**, taking into account the total ecological and social effects as costs and their ethical weighing against the expected benefits of an action.



Sufficiency content as principles guiding action in sustainable development

What does sufficiency entail?

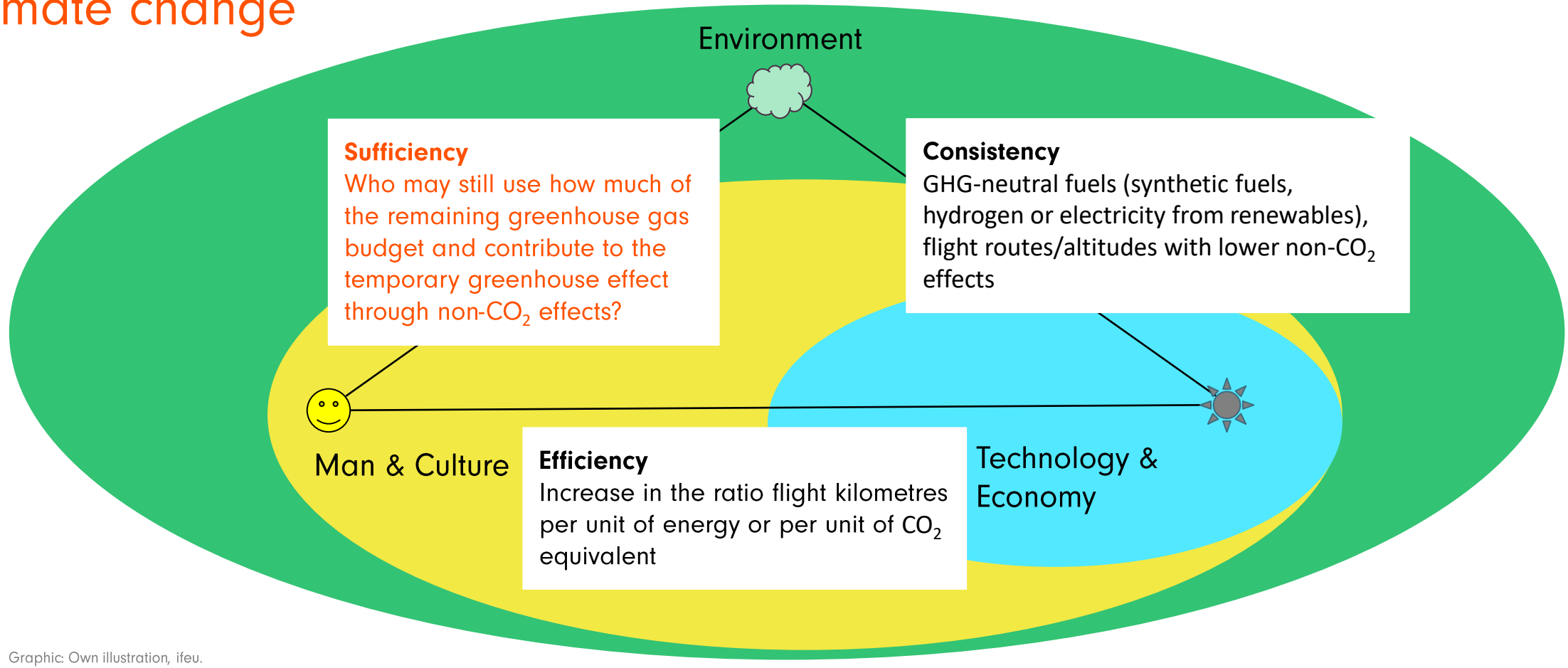
- **Appreciation** for the environment and natural resources
- **Equity:** Sufficient coverage of needs and access for all
- **Adaptation:** Reduction of oversize and overdimensioning
- **Substitution:** meeting needs differently, satisfying needs differently
- **Reduction:** questioning needs and desires and examining whether and why their fulfilment is necessary

Sufficiency content should become a guiding principle for:

- **Behaviour & Action**
- **Routines**
- **Strategy, Structure & Consumption Decisions**

Field of action "Flying"

Consistency, efficiency and sufficiency to meet the planetary boundary on climate change



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Operationalisation sufficiency in climate protection

Allocating global GHG budgets nationally

Starting point:

› Who is still allowed to use how much of the remaining **global greenhouse gas budget** and to what extent to contribute to the greenhouse effect through **non-CO_2** effects?

→ Political negotiation process

National reduction target:

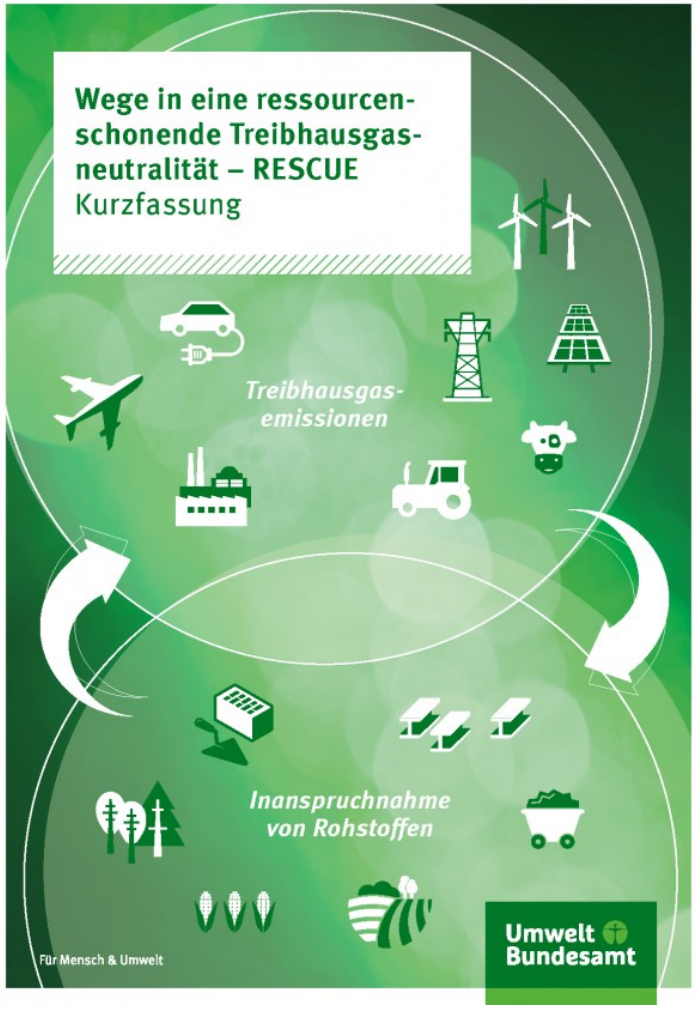
Germany aims to achieve greenhouse gas neutrality by 2045 and not exceed its national residual GHG emissions budget for the 1.5° target. Non-CO_2 effects make climate-neutral flying - even with CO_2–free fuels - impossible. However, non-CO_2 effects are not yet addressed by climate protection strategies.

→ National energy and climate protection scenarios: Budgets for sectors and / or consumption fields

RESCUE scenarios of the UBA:
Pathways to resource-efficient greenhouse gas neutrality in Germany by 2050

The RESCUE study of the Federal Environment Agency shows possible solutions and scope for action for paths to resource-saving greenhouse gas neutrality by 2050 in six scenarios:

- **GreenEe1+2** Energy efficiency/saving
- **GreenMe** Material efficiency
- **GreenLate** Slower implementation
- **GreenLife** Lifestyle Changes
- **GreenSupreme** Combination of the most effective measures of the scenarios



Source: Federal Environment Agency (2020)
Available at: https://www.umweltbundesamt.de/sites/default/files/medien/376/publikationen/rescue_kurzfassung_dt.pdf

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RESCUE scenarios of the UBA:

Only in the scenario GreenSupreme Germany meets its remaining GHG budget according to the 1.5°C target

Selection	Green Ee1+2	Green Late	Green Me	Green Life	Green Supreme
Sustainable consumption, total	High	Medium	High	Very high	
Nutrition, especially reducing meat	High	High	High	Very high, very fast	
Housing pP in 2050	49 m^2	53 m^2	49 m^2	41 m^2	41 m^2
Sharing, durability & repairability of products such as clothing, accessories, jewelry, furniture, ITC, toys, instruments, etc.	Medium	No change	Medium	Very high	Very high
Change in mobility Example 2050 vs. 2010	High	Medium	High	Very high	
New passenger cars in 2050	2 Mio.	3 Mio.	2 Mio.	1 Mio. incl. Carsharing	
Flights abroad, 2050 vs. 2010	+100%	+120%	+100%	Peak in 2030, +0% in 2050	

↘ Number of flights abroad as in 2010

Source: Lehmann, H., Dittrich, M. (2020): RESCUE - Wege in eine ressourcenschonende Treibhausgasneutralität. UBA, ifeu.

Reasons why sufficiency is indispensable when it comes to flying

- Sufficiency measures are **directionally safe** with regard to compliance with absolute limits.
- Sufficiency can be implemented immediately!

  → **Wild card in the** climate protection **race** & in complying with further planetary boundaries

Sufficiency **needs**

(in contrast to efficiency and consistency)

- **No** R&D funding & **no** investment for new technologies
- **No** market ramp-up & **no** incentive for supply & demand of new technologies (CO_2-free synthetic fuels)

Sufficiency **causes**

- **No** non-CO_2 induced climate effects in the atmosphere
- **No** lock-in effects & stranded investments of technical infrastructure (esp. airports)
- **No** exacerbation of (nationally and globally) unequal access to flight opportunities through higher costs for flying with CO_2-free fuels

Implementation proposals and challenges for sufficiency for the field of action of flying in academia

1. Determination of the remaining GHG budget incl. non-CO_2 effects for mobility in the field of science
   →Allocation or target agreement for each scientific institution
2. Plan air travel and quantify greenhouse effects ex ante
   → if budget is exceeded, apply sufficiency approaches:
   - **Adjustment:** Check the cost/benefit ratio, do not fly if the benefit cannot be sufficiently justified to justify the expense; how many people need to attend a meeting, a conference, an excursion?
   - **Substitution**: To which country(ies) or up to which distances can air travel be excluded? Is virtual participation also sufficient?
   - **Reduction:** Question the frequency, distance and number of people travelling by air and reduce if possible if it appears that the budget will be exceeded.
3. **Challenges:** Continuous monitoring and review of compliance with the budget as well as negotiation processes, enforcement control and sanctioning in case of threatened budget overruns must be newly established

About FlyingLess

The aim of the FlyingLess project is to support universities and research organisations in reducing air travel, which causes a significant part of their total greenhouse gas emissions.

FlyingLess develops approaches to reduce air travel in the academic sector, which are implemented at different levels (research, teaching and administration).

The project is being carried out in close cooperation with four pilot institutions - EMBL (European Molecular Biology Laboratory) and MPI Astronomy in Heidelberg as non-university research institutions and the Universities of Konstanz and Potsdam as universities.

Further information can be found on the website www.flyingless.de.

The project is being led by ifeu Heidelberg in close cooperation with the TdLab Geography at the Institute of Geography at Heidelberg University.

The project is funded over 3 years as part of the National Climate Initiative (NKI) of the Federal Ministry for Economic Affairs and Climate Protection.

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