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1. SUMMARY

As per paragraph 73(a) of the Policies and Procedures of the International Resource Panel (IRP), the IRP Secretariat carried out a Strategic Planning Exercise in 2017 to develop the 2018-2021 IRP Work Programme. This exercise included extensive internal and external consultations via online surveys, in person meetings, and interviews, to capture views from members and external public or private stakeholders. The following flowchart shows the steps completed as part of this Strategic Planning Exercise:



Overall more than 75 actors were consulted throughout this process by the Secretariat with the support of SYSTEMIQ. Online consultation of all members of the IRP Steering Committee (SC) and Panel were organized from March to October, three in-person meetings with members and external experts were organized (including the 20th IRP meeting in Helsinki), and some 45 interviews were carried out with representatives of intergovernmental, academic, and private sector platforms, NGOs, and the United Nations. Details and feedback received during this process are captured in Annexes 1 to 8.

This document is the result of a thorough, impact-driven, inclusive, and visionary consultation process. It provides the strategic direction of the IRP for 2018-2021 to ensure the achievement of its main objective which is “to contribute to a better understanding of sustainable development from a natural resources perspective, providing science-based policy options on how to decouple economic growth from environmental degradation while enhancing human well-being”. More specifically, it aims to provide answers to the following questions:

- What kind of impact does the IRP want to achieve in 2018-2021?
- What are the priority thematic areas that could be developed in 2018-2021 to achieve the desired impact?
- How can we mobilize the best science-policy expertise in 2018-2021 to achieve the desired impact?
- How can the IRP engage more and better with critical audiences?
- How can the IRP mobilize enough resources to effectively deliver the 2018-2021 Word Programme?
- How can the IRP monitor progress and measure results of the implementation of the 2018-2021 Word Programme?

Members have deeply reflected about the role of the IRP in this new phase. After 10 years of building a solid reputation and an extensive catalogue of knowledge, it is now time to use the IRP platform for policy change (from “Insights Creator” to “Solutions Driver” - “Implementation Supporter” - “Amplifier”). It is also time to reach out to other critical actors in the management of natural resources, in particular the private sector. It is time to connect the dots between the environmental cost of our economies and the social consequences of that cost. For the successful achievement of

this Programme, all IRP bodies (the Secretariat, the Steering Committee and the Panel) must increase their efforts as per their roles and responsibilities. The following will provide guidance to each one of them on where the ultimate focus of these efforts should lie.

2. THEORY OF CHANGE

As suggested by IRP members in Helsinki, the following overall theory of change has been developed for the 2018-2021 IRP Work Programme. The current IRP Theory of Change included in the UN Environment Programme of Work was used as a starting point. The main objective of this Theory of Change (ToC) is to serve as a mechanism to guide and prioritize the Panel's future substantive work and strategic actions. More background information on the Theory of Change can be found in Annex 1.

THE PROBLEM ANALYSIS

- Current patterns of resource use – underpinned by rapidly growing economies and populations¹, and wasteful systems of production and consumption – are unsustainable, contributing to mounting and potentially irreversible risks to future human wellbeing and security.
- Resource exploitation is resulting in aggravated environmental degradation and is placing increased pressure on the carrying capacity of Earth, endangering the very systems that provide the basis for sustainable development.
- Policies are therefore required that promote the sustainable management of resources.
- Policy-makers lack sufficient scientific information as a basis for developing policies for the sustainable management of natural resources. There is a lack of understanding of the benefits of and how to decouple resource use and environmental impacts from economic growth, and at the same time improve well-being. This lack of understanding also leads to incoherence between policies related to resources that are intrinsically linked, because of a lack of a holistic approach or systemic thinking.

THE ROLE OF THE INTERNATIONAL RESOURCE PANEL

- The IRP is a science-policy interface that promotes responsible use and management of natural resources in pursuit of sustainable development.
- The IRP contributes to a better understanding of sustainable development from a natural resources perspective, providing science-based policy options on how to decouple economic growth from environmental degradation while enhancing human well-being.
- It uses a systems approach to:
 - ✓ Prepare independent, coherent and authoritative scientific studies and assessments of policy relevance on the sustainable use and management of natural resources and in particular their environmental impacts over the full life cycle
 - ✓ Inform international policy discourse and development on emerging challenges and opportunities for the sustainable use and management of and equitable access to natural resources
 - ✓ Influence policy by creating relevant, reliable, timely and targeted knowledge; co-creating knowledge with multi-scale partners; having clear policy 'hooks' (particularly relating to the 2030 Agenda for Sustainable Development); stipulating impact pathways for agents of

¹ Consumption is found to be the main driver of increased material use, more important than population growth in recent decades [UNEP (2016). *Global Material Flows and Resource Productivity*. An Assessment Study of the UNEP International Resource Panel. H. Schandl, M. Fischer-Kowalski, et al. Paris, United Nations Environment Program.

change; translating knowledge to the regional and national levels; and tailoring communication to different stakeholders.

- The IRP therefore plays a catalytic role in national, regional and global priority setting and policy formulation as it increases understanding of patterns of resource use and related impacts – including of the importance of systematic data on resource use and management - and how to address/minimize those impacts. It also builds the capacity of policy-makers and politicians to build sound, coherent policies for the sustainable management of natural resources in support of the Sustainable Development Goals.
- The Steering Committee of the IRP also has an important role to play in helping the Panel's work be more visible and applicable.

THE OUTCOMES AND IMPACT PATHWAY

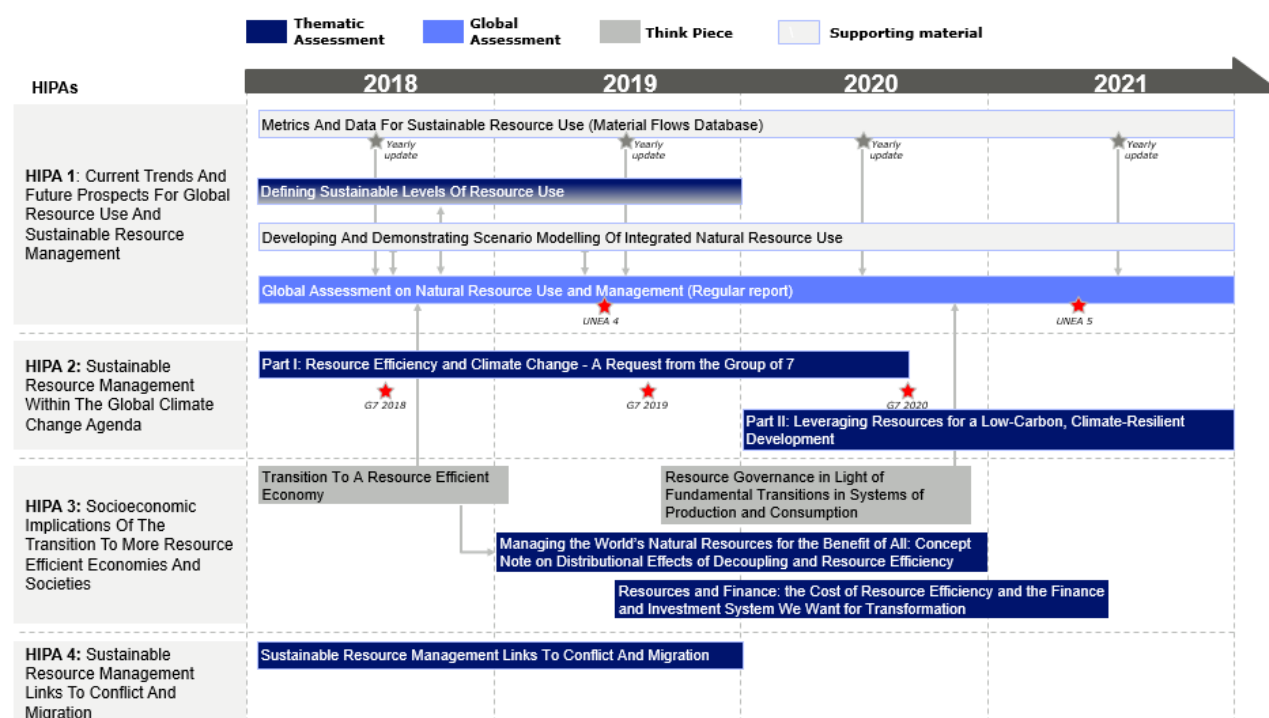
- Through the work of the IRP, policy-makers and other stakeholders gain a better scientific understanding of the environmental, social and economic issues, benefits and pathways (decoupling) to sustainable resource use and management that can inform decision making and policy development.
- The work of the IRP is taken up by policy-makers and politicians in making decisions related to resource use and management along the full life-cycle (including re-use, recycling and final disposal). The IRP's work is also taken up by other stakeholders that can influence the policy discourse (such as research institutions, civil society organisations and business associations), or even take direct action to improve the management of natural resources (primarily, the private sector).
- The IRP's scientific findings are thus used to inform policies that promote the sustainable management of resources at global, regional and national levels. Policies are designed with an aim to mitigate the adverse environmental, social and health impacts of natural resource use, as well as create new opportunities for economic gains, security of supply, and enhanced long-term economic development.
- The work of the IRP helps improve policy integrated assessment analysis by including the natural resource dimension.
- The beneficiaries include the human population globally, but in particular populations whose lives are especially affected by the environmental and social impacts of resource exploitation (often the most vulnerable groups, such as the poor and women, who depend directly upon natural resources for their livelihoods and to provide for the basic needs of their families).

3. DEVELOPING SOLID POLICY-RELEVANT SCIENCE: HIGH-IMPACT PRIORITY AREAS

The IRP will focus its efforts and resources in 2018-2021 to provide scientific knowledge in the following four High-Impact Priority Areas (HIPAs):

1. Current trends and Future Prospects for Global Resource Use and Sustainable Resource Management.
2. Sustainable Resource Management within the Global Climate Change Agenda
3. Socio-Economic implications of the transition to more resource efficient economies and societies.
4. Sustainable Resource Management links to Migration and Conflict.

Within each one of these areas, a number of potential assessments, think pieces, and tools will be developed in this cycle as follows:



Details of each HIPA are included in the next section. IRP Members may propose additional studies and assessments throughout the work cycle if considered in line with the goals set in this Work Programme.

3.1. HIPA 1: CURRENT TRENDS AND FUTURE PROSPECTS FOR GLOBAL RESOURCE USE AND SUSTAINABLE RESOURCE MANAGEMENT

Global use of natural resource use has accelerated during the past decades and emissions and waste have grown in line with growing extraction of natural resources. Monitoring natural resource use and analyzing trends and outlooks of natural resource use will be instrumental in meeting the UN Sustainable Development Goals.

In addition, assessing "sustainable use and management" of global resources requires to define criteria and reference values on what the IRP considers to be a sustainable level of use for each of the major resources (materials, land, water). This might imply a threshold band between a higher level with clearly defined risks, and a lower level where a safe operation can no longer be assumed, with a range of uncertainty between lower and higher threshold.

Further, an increased understanding of the potential of different governance approaches, and the reasons for the failures of the currently dominant approaches, will further strengthen the potential impact and political relevance of the IRP.

Through this high-impact priority area, the International Resource Panel can provide insight into status and trends in natural resource use globally and across regions, tracking improvements and fostering growth in circularity of material use, supporting the global monitoring of the natural resource element of sustainable development goals. It will also be able to define sustainable use and management of natural resources. With the help of scenario modelling, the IRP will be able to identify the most promising policy options and could outline different pathways for countries as well as interlinkages and co-benefits between different policy areas.

ROUTE TO IMPACT²

The IRP will provide insight into trends in resource use across regions, tracking improvements and fostering growth in circularity of material use, supporting the global monitoring of the natural resource element of sustainable development goals.

Objectives (short and long term)	Geographical focus	Target audience(s)	Services, products and tools	Key Performance Indicators to track impact
<ol style="list-style-type: none"> 1. Provide up-to-date information on status of natural resource use and management on global and regional level. 2. Define sustainable resource use and explain links to Sustainable Development Goals. 3. Provide information on outlooks and trends of natural resource use under Business-as-Usual and resource efficient scenarios. 4. Support countries in monitoring their natural resource use. 5. Provide policy options and strategies to promote low-carbon and resource efficient societies. 	Global with some regional products or sub-products.	Policy makers, statistical offices, intergovernmental bodies/platforms (e.g., UNEA, HLPF, G7, G20), global and regional research initiatives, academia, and civil society. Certain actors within the private sector would be approached through platforms like the World Economic Forum, the Ellen MacArthur Foundation or the Global Commission on the Economy and Climate.	<ol style="list-style-type: none"> 1. IRP assessment reports, think pieces, and articles in prestigious academic outlets. 2. Data base updates 3. Other communications products (including summary for policy-makers, factsheet, infographics, policy and private sector briefs and presentations) 4. Dissemination and outreach events at relevant meetings, among other target audience events. 5. Capacity-building tools (e.g. Massive Open Online Course) and workshops. 	<ol style="list-style-type: none"> 1. Download rates; utilisation/certification rates; number of references at major conferences; 2. New requests for information coming from target audiences. 3. Feedback by policy-makers and other stakeholders at IRP meetings and in surveys.

² Tailored elements of this route to impact may be suggested for the proposed topics.

The following topics have been proposed as part of this area:

3.1.1. METRICS AND DATA FOR SUSTAINABLE RESOURCE USE

Proposed by: Heinz Schandl

Suggested Working Group members: to be defined

Format:

- Regular data base updates
- Extension to additional footprints (water, land, energy)
- Linkages to impact (environmental, social, economic)
- Use of data for scenario and modelling efforts for regular IRP reporting
- Capacity building courses and workshops for countries to use the data set

The Working Group will ensure coordination with the Working Groups of the Global Assessment on Natural Resource Use and Management 2019, and the report “Developing and demonstrating scenario modelling of integrated resource management”.

Rationale: The IRP is the custodian of a global, multi-regional, country by country material flow database which covers direct material flows and material footprints for a period of 5 decades. This data base has grown in importance in the context of the SDG’s and related reporting requirements. The IRP fills a knowledge gap that exists in most countries globally with regard to reporting capacity during a time when the international community ramps up its reporting capabilities. The UN Environment also leads a process of developing a global material flow accounting manual and such guidelines, once approved by the UN statistical commission, will allow for capacity building at National Statistical Offices who will, in the medium term take responsibility for the reporting.

While material flow accounts, when fully established, provide a comprehensive picture of environmental pressures natural resource use is broader than material flows. They ideally include material and waste, energy and emission, water and land. These accounts need be developed in complementarity to the national accounts using the SEEA framework as a guideline. In doing so, environmental accounts can be closely linked to socio-economic activities which helps align economic and environmental policy priorities.

The material flow data set also creates a competitive edge of the IRP who is the sole provider of such information and once the dataset is made available online, it will represent an important public good resource for policy makers, businesses and academics and the general public. To maintain its global leadership role for material flow accounts, the IRP needs to invest further to grow its competency.

Key Questions:

- How did natural resource use develop in the last year(s)?
- How did natural resource use develop in different countries and regions?
- Did the Physical Trade Balance change and if so how?
- How did the material footprint develop globally, regionally and nationally?
- How are countries doing in achieving SDGs 8.4 and 12.2?

Scope and methodology:

1) The current material flow dataset needs to be updated on a yearly basis and subsequent updates need to integrate the input and outside of the accounts which requires integration of emission

accounts and development of comprehensive waste accounts. Such updates would need to occur on a yearly basis until statistical offices are ready to take on reporting.

2) While other agencies prepare energy and emission accounts the quality of those will benefit from the IRP's research. The IRP is also in a good position to provide a footprint perspective for all aspects of environmental accounts and could establish energy, GHG, water and waste footprints next to the material footprints. These additional footprint accounts would leverage the experience gained from material footprinting. There is currently no authoritative source for such a comprehensive set of environmental footprints.

3) The availability of comprehensive material flow accounts will allow additional analysis of environmental (and social and economic) impacts of natural resource use. This will allow a deeper integration of environmental pressure indicators with specific impacts such as resource depletion, biogeochemical cycles, climate change, pollution and toxicity and ultimately enable to link the SDGs's to the notion of planetary boundaries.

4) Data sets will also be used as an input to the modelling and scenario work of the IRP to assess the combined economic and environmental consequences of different policy options such as has been done for the G7.

Route to Impact: Why the IRP? The IRP is ideally positioned to provide the evidence base (datasets, indicators) to measure and model progress of resource productivity and the sustainable management and use of natural resources because of its scientific excellence, robust peer-review processes for its methods, data sets, indicators and analysis and reporting and its deep understanding of the science-policy interface in the domain of sustainable natural resource use.

To grow the impact of this underpinning dataset capability of the IRP

- Data will be made available on the IRP website and other online platforms such as e.g. UNEP Live which will be an attractive data source for government agencies, international organisations, NGO's and academics
- Data will be used in IRP reports especially in the IRP regular report to inform the global policy community about resource use dynamics but also for scenario modelling and environmental impact assessment
- Data will also be used in the context of other reporting initiatives such as the Global Environmental Outlook, statistical yearbooks, other online sources such as the European Raw Materials Scoreboard, SDG reporting
- The IRP is establishing a unique and authoritative knowledge base including data and indicators which will further cement the IRP's lead role as a trusted advisor to the policy and business community with regard to economic activity and its resource use, waste and emission consequences including the role of trade for relocating pressures and impacts between countries.

Terms of Reference: to be developed following approval and further guidance by the Steering Committee on this high impact priority area.

3.1.2. DEFINING SUSTAINABLE LEVELS OF RESOURCE USE

Proposed by: Stefan Bringezu

Suggested Working Group members: Anders Wijkman (others to be defined)

Format: Thematic assessment or think piece (to be discussed).

Background:

Assessing "sustainable use and management" of global resources requires to define criteria and reference values on what the IRP considers to be a sustainable level of use for each of the major resources (materials, land, water). This might imply a threshold band between a higher level with clearly defined risks, and a lower level where a safe operation can no longer be assumed, with a range of uncertainty between lower and higher threshold (similar to the SOS definition by Steffen et al. 2015).

Another option is to start out with the "area of concern", e.g. a target environmental impact level, and then quantify the implications on resource use. While scarcity is only an issue for some resources, impacts on the environment and human wellbeing are substantial, and these impacts may thus put limits on resource use. Therefore, it may be most meaningful to define targets on the level of impacts. The latter would be similar to the procedure of IPCC, starting out with an impact-based 2-degree (or 1.5 degree) target and then breaking down what this target means in terms greenhouse gas emissions. Both levels of target setting would connect directly to the decoupling framework that IRP is using (Figure 1).

While depletion is relevant for stocks and funds, competition is the main point for flow resources (Sonderegger et al. 2017)³. Target values for stocks quantify a "budget", while those for flows quantify a flow boundary that should not be exceeded. Similarly, the planetary boundaries can be classified as stock and flow boundaries (Häyhä et al. 2017)⁴.

Developing orientation values is seen as a long term project of the IRP, one which will: make use of resource based as well as impact based definitions of targets (as proposed in 21 IRP Meeting Document Item 10.1: Concept note on the normative orientation values of the IRP)⁵; balance urgency with limitations of knowledge availability; and evolve over time as more information and knowledge becomes available.

³ Sonderegger T, Dewulf K, Fantke P, Maia de Souza D, Pfister S, Stoessel F, Verones F, Vieira M, Weidema B, Hellweg S, Towards harmonizing natural resources as an area of protection in Life Cycle Impact Assessment, International Journal of LCA, DOI 10.1007/s11367-017-1297-8, 2017

⁴ Häyhä T, Cornell SE, Hoff H, Lucas P (2017), Operationalizing the concept of a safe operating space at the EU level – first steps and explorations, A report for the European Environment Agency

⁵ Document Item 10.1 highlights that setting targets for the sustainable level of use of some resources is straightforward (for example, water). However, for many other resources where environmental impact as a result of use is a more significant concern than scarcity, development of targets should be based on an assessment of the acceptable level of impact to human and planetary systems.

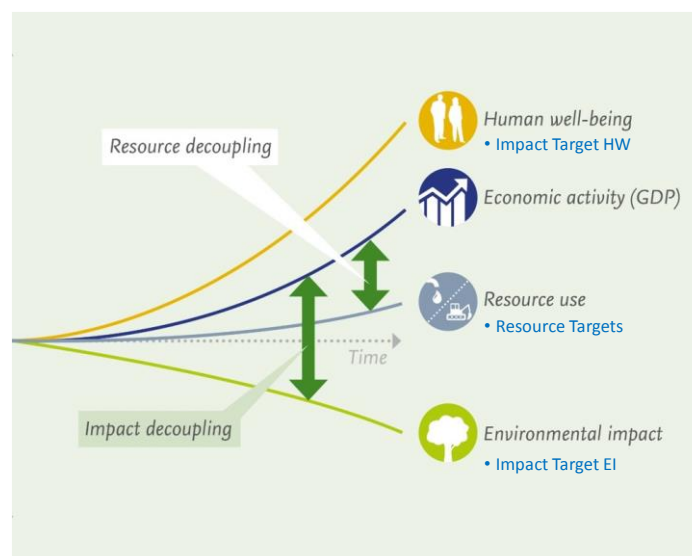


Figure 1: Target-based decoupling of impacts and resources. Targets may be composed of several sub-targets.

The following concept mainly addresses the first option (resource based targets). The concept has been supplemented with content from the complementary proposal (21 IRP Meeting Document Item 10.1: Concept note on the normative orientation values of the IRP) and recommendations received at that meeting by Panel and Steering Committee members. The final terms of reference will further seek to address the requirements to merge the two approaches in order to identify a unique IRP methodology that sits at the forefront of available science on orientation values for the use and management of natural resources.

Rationale:

The SDGs provide a guiding framework which defines the well-being of humans and the well-functioning of the environment as overarching goals. With respect to human wellbeing we may assume that there is no upper limit to further development (in terms of education, knowledge creation, individual development). However, with regard to the use of natural resources and related impacts on the environment, there seem to be limits. These limits cannot be defined easily. Due to the complex interaction of anthroposphere and nature, there do not seem to be clearly cut tipping points of natural resource extraction, use and final disposal beyond which systems functions at a higher scale break down. For instance, if a large open pit mine is opened it is clear that the biological inventory of the area is completely lost; whether this will lead to a loss of biodiversity in the region depends on many factors, and what makes it even more complicated: it is the sum of many different of such activities and also similar activities such as the expansion of cropland into savannahs and forests which may have an even higher impact and enhance the pressure exerted by mining. Thus, the assessment of impacts such as on biodiversity need to be considered at different scales.

Those limits cannot be defined only by natural sciences as one key question is how much environmental change is and will be regarded acceptable by societies. The answer to this question implies normative valuations; it might also require to determine which risk or uncertainty is acceptable to human populations. It might involve considerations of precaution. And it will have to consider that the burden of resource use (during extraction or disposal) affects other groups than the benefit of its use (during production and consumption). Fact is that social-legal and sometimes military conflicts about resource extraction, refining and waste disposal are growing worldwide, so that the definition of thresholds is also needed for societal safety and security.

Defining safe modes of natural resource management, so far has been done mainly at the level of fields, forests and fish populations. That local management approach, however, is insufficient, and needs to be complemented by management mechanisms at a higher level which ensure that the demand for resources via product use will not exceed levels which can sustainably be supplied. International agreements on sustainable resource management of global resources are still in their infancy, and the use of global resources is mainly regulated by national jurisdiction setting the frame for domestic production and consumption and infrastructure development which makes use both of domestic and foreign resources (Bringezu, Potocnik et al. 2016). In order to provide national governments with yardsticks to assess their consumption of global resources, reference values on sustainable levels are needed. This also implies that the target corridor(s) would need to be defined in terms of indicators which are or can be applied at the national level.

For that purpose, the targets listed so far for the SDGs are not sufficient. They are either too specific or unspecific, and with regard to resource use aim at strategies such as material productivity increase rather than absolute levels of resource consumption.

The IRP had started to derive reference values for sustainable resource use. For instance, UNEP (2014) argued that for the implementation of the CBD goal of halting loss of biodiversity, and with regard to the findings of MEA (2005) it would be necessary to halt the expansion of cropland worldwide. The suggested orientation value of 0.20 ha/cap cropland in 2030 for the consumption of agricultural goods has been discussed and adopted meanwhile by several policy documents.

This research stream could identify the normative criteria as well as the operational criteria to define what the IRP would deem a safe operating space for resource use, within the framework of the SDGs as a pathway. Modelling in a multi-scenario framework could then investigate which policies and policy packages would bring us closer to these objectives, and whether they are economically viable. Only if the "limits space" (or: the guardrails) is sufficiently known, can the "solution space" (or: the road to future) be safely reached.

Key Questions:

- What properties shall orientation values of a "safe operating level" of global resource use have with respect to those who will use them?
- What target levels of natural resource use (land, water, materials) can be derived from existing international agreements and commitments such as "land neutrality" (e.g. CBD, REDD, SDGs)?
- Which parameters measuring progress towards those targets could be applicable to (a) the territory and (b) the economy (production and consumption) of a country or region?
- What global or regional targets of natural resource use can be derived from the analysis and modelling of local conflicts resulting from resource extraction or harvest?

Scope and methodology:

IRP has already used quantitative resource targets in some reports. An example is the "0.2 ha cropland/person in 2030" orientation value set up by Stefan (Bringezu 2012), based on global average cropland use and the goal to halt biodiversity loss by limiting land use change. Further indicators include mass-based metrics, such as the material footprint or domestic material extraction, and in some reports targets for these metrics were used. The coherence of scientific methods of establishing these and future targets for the IRP must be clarified.

The study will aim to move beyond the 'trade-off' paradigm when looking at issues of wellbeing, and to learn from successful attempts to place targets in the policy arena. Setting a 'no regret' target (for example committing to maintain current levels of resource use), while not sufficient, would be a positive step in the right direction while further analysis is undertaken. Overall, target setting is considered the role of governments, and the IRP's contribution would be in exploring a 'safe

operating space' for resource use, taking into consideration the implications related to diverse resources.

There are different concepts of the approaches that should be pursued in the Panel. Ultimately, it was agreed to proceed along resource and impacts based lines of investigation in developing targets and orientation values. The role of the panel in identifying limitations to resource use is critical. Values could be developed in an iterative manner [including starting with proxy measures that are meaningful to a political discussion], based on existing targets where applicable, and maintaining a resource based approach. The question of target (orientation) setting should be closely linked to the works of the Scenario Modelling and GANRUM streams; and as a long term endeavor for the IRP.

In terms of methodology, the study would ideally follow a top-down and a bottom-up approach:

Analysis of existing international agreements relevant for natural resource use, and the derivation of indicators and targets which can be applied by countries both to their territory and to their production and consumption system. Examples are the goal to stop biodiversity losses and "land neutrality" which can be related to indicators and land use change.

Spatially explicit modelling of conflicts from resource use. Existing models can be used to model conflicts between agriculture, forestry and nature conservation (in terms of biodiversity and GHG emissions), agriculture and water management (in terms of water scarcity); models could also be extended to include mining and agriculture (in terms of food supply security and water security). A mapping of social conflicts on resource extraction and waste disposal could be included; a starting point could be the "Environmental Justice Atlas".

The modelling of extraction and harvest of resources would lead to indicators on material flows and related land and water use. Projections of status quo could then be done (a) under BAU assumptions, and (b) under conditions of low conflict outcomes. This could support the derivation of a "low risk-safe level" and "low risk-uncertain level" thresholds for orientation on sustainable material consumption (under conditions of sustainable land and water use).

The top-down approach should be feasible within a year. The bottom-up modelling might require 2 – 3 years (depending on the requirements to extend existing models and available personal resources).

Route to Impact: The result would be a set of reference values which could be used by national governments – and UN institutions - to benchmark their progress towards sustainable use of global resources.

The top-down approach could be conducted by a team of experts experienced with the derivation of targets from policy documents. For the bottom-up analysis the involvement of modelers will be essential.

Interim and final results should be discussed with stakeholder groups in order to enhance transparency, cross-check for practical feasibility, and thus foster the acceptance and impact of the expected outcome.

Terms of Reference: To be developed, based on the above as well as on 21 IRP Meeting Document Item 10.1, following approval and further guidance by the Steering Committee on this high impact priority area.

3.1.3. DEVELOPING AND DEMONSTRATING SCENARIO MODELLING OF INTEGRATED NATURAL RESOURCE USE

Proposed by: Michael Obersteiner, Heinz Schandl, and Steve Hatfield-Dodds

Suggested Working Group members: Paul Ekins , Ester van der Voet, others to be defined

Format: To be determined, potentially rapid assessment as well as feeding into “Global Assessment on Natural Resource Use and Management” and “Resource Efficiency and Climate Change: A Request from the Group of 7”.

Rationale: Please refer to Terms of Reference.

Key Questions: Please refer to Terms of Reference.

Scope and methodology: Please refer to Terms of Reference.

Terms of Reference: Please refer to the Annex of this Work Programme.

3.1.4. GLOBAL ASSESSMENT ON NATURAL RESOURCE USE AND MANAGEMENT

Proposed by: Bruno Oberle

Suggested Working Group members: To be defined.

Format: Global Assessment on Natural Resources Use and Management.

Rationale: The Global Assessment on Natural Resources Use and Management is the flagship publication of the International Resource Panel, as outlined in the Panel’s Policies and Procedures. It is described therein as ‘a scientific assessment that synthesizes the latest and best available scientific and socio-economic literature on the state, trends and outlook of natural resource use and management in the context of sustainable development. The global assessment may contribute to the development of baselines and indicators to monitor progress on sustainable development from a natural resource perspective. It is published every 4 years and has three main elements: full report, summary for policymakers and supporting materials (dataset, case studies, etc.). A technical summary may also be considered when deemed appropriate by the Panel’.

Key Questions: To be developed for the next IRP meeting.

Scope and methodology: To be developed for the next IRP meeting. The global assessment may contribute to the development of baselines and indicators to monitor progress on sustainable development from a natural resource perspective. It is published every 4 years and has three main elements: full report, summary for policymakers and supporting materials (dataset, case studies, etc.). A technical summary may also be considered when deemed appropriate by the Panel’.

Terms of Reference: To be developed for the next IRP meeting.

At the 18th IRP Meeting, Panel and Steering Committee members agreed to respond to the UNEA-2 invitation by developing an ‘interim report’ of limited scope to be submitted to UNEA-3 (December 2017), and a follow-up comprehensive report to be submitted to UNEA-4 (2019). Further, discussions at the meeting confirmed the Panel’s intention to develop a flagship publication – the Global Assessment on Natural Resource and Management – and agreed that the response to the UNEA-2 resolution could serve as the first of the IRP flagship series. Panel Co-Chair Janez Potocnik convened a scoping meeting on 18 – 19 September 2017 in Tunisia to begin the development of Terms of Reference for the 2019 report, which will be submitted to the 21st Meeting of the IRP in Lima, Peru for approval by Panel and Steering Committee.

Key questions, scope and methodology and route to impact – alongside all other TOR requirements – will be presented at that time. These terms of reference will take into consideration work done for the assessment “Developing and demonstrating scenario modelling of integrated natural resource use” and the assessment “Resource Efficiency and Climate Change: A Request from the Group of 7”.

Terms of Reference: Please refer to the Annex of this Work Programme.

3.2. HIPA 2: SUSTAINABLE RESOURCE MANAGEMENT WITHIN THE GLOBAL CLIMATE CHANGE AGENDA

Climate change is upon us. Fossil energy enabled the economic development and population growth seen over the past two centuries. World leaders have decided to aim at limiting the increase in the average global temperature to below 2°C, which has far-reaching implications for resource management.

On the one hand, greenhouse gas emissions must be curtailed through energy conservation and the use of low-carbon energy sources, eventually to be supplemented by carbon removal technologies. Material efficiency, smart material choices, and the use of secondary resources can contribute substantially to reduce energy use for primary material production. However, low-carbon technologies may increase resource demand, e.g., metals for electricity transmission and storage, and biomass as a low-carbon energy source and carbon removal mechanism.

On the other hand, even a temperature increase of only 2°C impacts both resource production and resource demand as it will be met by defensive measures such as sea barriers and increased air conditioning.

It is not only that climate change mitigation and adaptation require resources and resource management may contribute to fashioning an effective response to climate change, it is also that policies interact and overlap. Climate-resource interactions, both synergic and antagonistic, need to be better understood.

Through this high-impact priority area, the International Resource Panel could provide insight on the two-way interaction between climate change action and sustainable resource management.

ROUTE TO IMPACT⁶

The IRP will work to provide innovative evidence of climate-resource interactions.

Objectives (short and long term)	Geographical focus	Target audience(s)	Services, products and tools	Key Performance Indicators to track impact
6. Assess the role of specific resource efficiency and circular economy policies in the achievement of the goals set in the Paris agreement. 7. Provide knowledge to understand resource requirements for mitigation and adaptation to climate change and their environmental impacts. 8. Assess impact of climate change on resource availability, including availability-accessibility of critical (rare) metals for low-carbon technologies and linked mining operations, impacts on terrestrial and marine resources. 9. Provide policy options and strategies to promote low-carbon and resource efficient societies.	Global with some regional products or sub-products.	Policy makers, UNFCCC negotiators and experts, Intergovernmental platforms (e.g., UNEA, HLPF, G7 ⁷ , G20), Intergovernmental research initiatives (e.g. IPBES, IPCC); academia, and civil society (media, Green 10, NGOs). Certain actors within the private sector would be approached through platforms like the World Economic Forum, the Ellen MacArthur Foundation, the World Business Council on Sustainable Development, the Global Commission on the Economy and Climate, or the	6. IRP assessment reports, think pieces and articles in prestigious academic outlets such as Science or Nature Climate Change. 7. Other communications products (including summary for policy-makers, factsheet, infographics, policy and private sector briefs and presentations) 8. Dissemination and outreach events at COP, G7 and G20 meetings, among other target audience events. 9. Capacity-building tools (e.g. Massive Open Online Course) and workshops.	4. Download rates; utilisation/ certification rates; number of references at major conferences; 5. New requests for information coming from target audiences. 6. Feedback by policy-makers and other stakeholders at IRP meetings and in surveys.

⁶ Tailored elements of this route to impact may be suggested for the proposed topics.

⁷ The G7 Environment Ministers, under the Italian G7 Presidency, requested in June 2017 for the IRP to produce a study on the potential GHG reductions of resource efficiency policies with the aim of pursuing co-benefits by identifying the most promising resource efficient measures in regard to their GHG abatement potential.

		C40 Cities Climate Leadership group.		
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The work under this area will be comprised by two parts. Part I will focus on the relationship between resource efficiency and climate change; while Part II will zoom into the resource requirements of climate change mitigation and adaptation strategies.

3.2.1. PART I: RESOURCE EFFICIENCY AND CLIMATE CHANGE - A REQUEST FROM THE GROUP OF 7

Proposed by: Edgar Hertwich, Saleem Ali, Niko Heeren, Stefan Pauliuk

Suggested Working Group members:

-IRP Members (interest confirmed): Edgar Hertwich (proposed lead author) Stephanie Hellweg, Tom Graedel, Ester van der Voet.-IRP candidates (interest confirmed): Saleem Ali, Helga Weisz, Reid Lifset.

-External Members : Stefan Pauliuk (University of Freiburg, DE), Elsa Olivetti (MIT, USA), Matt Eckelman (Northeastern University, USA), Junming Zhu (Tsinghua University), Niko Heeren (ETH/Yale), Tomer Fishman (Yale); Rakhyun Kim, Utrecht University, The Netherlands, Eric Masanet (Northwestern University, USA), Luca Ciacci (Uni. Bologna), Fulvio Ardente (EC), Kazuyo Matsubae (Tohoku University, tbc).

Format: Thematic Assessment plus short publications in prestigious academic outlets. Considering the complexities of this assessment and state of knowledge, and in order to respond to the G7 request in a solid and evidence-based manner, a thematic assessment (rather than a rapid assessment) will be developed. Furthermore, given the significant degree of novel work required for this assessment and in order to increase potential impact of this work, the publication strategy would include publications in academic outlets after publication of the main report and/or summary for policy-makers. One option is to commission a Special Issue of the Journal of Industrial Ecology (similar to the Green Technology Choices report) and to summarize its content in a high-level journal, such as *Science* or *Nature Climate Change*. The working group will present insights from a comprehensive review of resource efficiency and climate policies at the 2018 summit of the G7.

The Working Group would need to capitalize on the substantial amount of ongoing research addressing these questions and integrate disparate elements in a model framework. The utilization of previous and ongoing IRP reports on metals, GHG, scenarios, and decoupling is to be explored. The Working Group will ensure coordination with the Working Groups of the Global Assessment on Natural Resource Use and Management 2019, and the report “Developing and demonstrating scenario modelling of integrated resource management”.

Rationale: In the Communiqué of the G7 Bologna Environment Ministers’ Meeting, the International Resource Panel (IRP) is requested to develop an assessment on the linkages between resource efficiency and climate change. After acknowledging the contribution of the IRP report “Resource Efficiency: Potential and Economic Implications”, and in particular the contribution of the IRP to the development of resource efficiency indicators, the communiqué asks the IRP to:

Further assess the potential GHG reductions of resource efficiency policies with the aim of pursuing co-benefits by identifying the most promising resource efficient measures in regard to their GHG abatement potential. To this end, we invite the IRP to conduct a study on the above, including providing

emission scenarios connected to the implementation of RE/CE/3R/SMM⁸ policies and comparing these with the implementation of conventional policies. An assessment of the deployment of low carbon technologies relevant for the implementation of RE/CE/3R/SMM should also be provided. Italy will provide financial support to develop the study.

As a consequence, the IRP seeks to conduct a thematic assessment, following the above-mentioned Resource Efficiency report, to assess the potential of resource efficiency strategies (encapsulated under policy frameworks on Resource Efficiency/Circular Economy/Reduce, Reuse, Recycle/Sustainable Materials Management) to reduce greenhouse gas emissions.

Resource efficiency strategies⁹ are here defined as approaches to reduce the demand for materials by means of more efficient use, such as appropriate material choice, design, reuse of products or components (if required, after refurbishment or remanufacturing), and recycling. They will be investigated at the level of individual technology systems, e.g. the reuse of I-beams in the construction of buildings or the recycling of waste electric and electronic equipment.

Key Questions:

The objective of this assessment is to highlight synergies between the conservation of material resources and climate change mitigation at a global scale, assessing in particular the following key questions:

1. What GHG abatement can be achieved through the deployment of resource efficiency strategies at different levels of ambition?
2. What is the role of low carbon technologies in the implementation of resource efficiency, both with respect to the deployment of resource efficiency in low carbon technologies (e.g., recycling of photovoltaic (PV) systems) and the effect of low-carbon energy on the GHG abatement achievable with a specific strategy?

Scope and methodology:

The assessment will discuss the role of specific Resource Efficiency/Circular Economy/Reduce, Reuse, Recycle/Sustainable Materials Management policies, in particular those related to technical standards, product-oriented policies, and recycling mandates and our status of knowledge with respect to their effectiveness and interaction with climate policies.

The study will combine a 'bottom-up' analysis of identified resource efficiency measures and technologies with upscaling in a counterfactual scenario approach. The calculation of benefits will hence be based on the concept of avoided burden compared to the primary production of resources, but looking at a larger scale instead of individual applications at the unit level. The assessment will consist of following elements¹⁰:

⁸ Resource efficiency; circular economy; reduce, reuse, recycle; sustainable materials management.

⁹ The G7 document talks about policies. Here, we use the term strategy to address technical measures, such as recycling, light-weighting, or product lifetime extensions, and reserve the term policy for the regulations, taxes, subsidies and other approaches by which governments achieve the implementation of technical measures. Given the technical focus of the *RE/CE/3R/SMM* frameworks, we assume that the G7 is primarily interested in the technical measures (also indicated by Italy's input).

¹⁰ This section is structured so that the major elements of the work become apparent. It is envisioned that the report focuses more on key results and less on how the work was structured.

1. Categorization of resource efficiency strategies and associated technical measures based on literature review and interviews with policy makers and experts. Development of conceptual framework describing how different concepts (Circular Economy/Reduce, Reuse, Recycle/Sustainable Materials Management) relate to each other, development of a common system definition, and identification of a set of core strategies and which stocks and flows in the system they impact.
2. Mapping of resource efficiency policies and climate policies and their relationship, including identification of synergies and trade-offs. Experiences with resource efficiency policies in different countries as ascertained through a focus group methodology with regulators and stakeholders.
3. Run dynamic stock-flow models of materials (major metals, cement, plastics, cellulose): study historical and current material use; identify underlying dynamics and driving factors, assess implications for future material availability, determine relationship to parameters covered in external scenarios such as those developed (for the first G7 assessment) and to be developed (HIPA 1) by the IRP Scenarios Working Group¹¹. These models would cover both the dynamics and the historical analysis of drivers to consider parametrization of predictive models. . They would also help provide a resource module to the existing SSP efforts of the IPCC community so as to strengthen the impact of resource efficiency considerations in climate change policies.
4. Description and life cycle assessment of resource efficiency strategies and technologies for major material groups, such as metals, cement, plastics, and cellulose, in key applications, such as buildings and infrastructure, vehicles, and consumer products. LCA data to estimate environmental impacts such as greenhouse gas emissions and energy/resource requirements of specific Resource Efficiency strategies and a baseline without these strategies.
5. Modelling of counterfactual resource efficiency scenarios. Development of the general scenario approach by integrating the LCA indicators (at product/plant level) into the dynamic stock and flow model (at global, potentially multiregional scale). What are reference scenarios and their assumptions? What is the material demand for different purposes, based on the underlying assumptions about population, economic and technology development? Integration of life cycle calculations and material stocks and flows. An economic analysis will be included using the models developed for the assessment "Resource Efficiency: Potential and Economic Implications".
6. Life-cycle benefits of resource efficiency based on a comparison of resource efficiency scenarios with counterfactual reference scenarios. Quantification and detailed analysis of the life-cycle greenhouse gas emissions of resource efficient solutions based on scenario modelling, demand projections, and life cycle impacts determined in this work.
7. Identifications of major leverage point in the system, estimation of their mitigation potential, and recommendations for institutional reform and international coordination of resource efficiency through existing international environmental law and implementation strategies at the national and local level.
8. The detailed, bottom-up knowledge about specific resource efficiency strategies will be developed so as to inform the work of the IRP Scenarios Working Group.
9. The work on resource efficiency strategies for this report will include (a) a discussion of the interaction of resource efficiency and climate policies based on a review of literature and experience in different world regions, with a focus on major economies; (b) an analysis of economic aspects and consequences of resource efficiency, potentially addressing issues of

¹¹ Exchanges with Heinz Schandl, IRP member of the Scenarios Working Group are currently taking place to ensure this.

employment, growth, and distributional impacts of climate change; and (c) a policy stakeholder consultation process running in parallel with the study.

Route to Impact:

This thematic assessment has been requested by the Group of 7. This ensures demand driven work to be presented to decision makers from some of the top GHG emitting countries. The IRP would aim to present the results of this work to the G7 at its annual summit in 2019.

Furthermore, this work will feed into the implementation process of the Paris Agreement. Under said Agreement, countries committed to (among other things):

- Keep the increase in global average temperature well below 2°C above pre-industrial levels;
- Aim to limit the increase to 1.5°C, since this would significantly reduce risks and the impacts of climate change;
- Undertake rapid reductions thereafter in accordance with the best available science.

According to the agreement, the "nationally determined contributions" or NDCs of member states to the above mentioned targets should be "ambitious", "represent a progression over time" and set to achieve the purpose of the agreement. The implementation of the agreement will be evaluated every 5 years, with the first evaluation due in 2023. The outcome of this evaluation would serve as input for new NDCs. Scientific evidence of the contribution of sustainable resource management to the achievement of the Paris agreement targets could be particularly relevant for this evaluation, feeding directly into national mitigation strategies. The IRP will aim to present the report at the 25th Conference of the Parties in 2019 and an interim think piece with preliminary results at the 44th G7 summit to be held in 2018.

Given the novelty of this work, a parallel engagement process of academia will be undertaken through the publication of articles in prestigious academic outlets such as Science or Nature Climate Change.

To increase impact potential among policy makers, cooperation will be sought at different stages with the [Intergovernmental Panel on Climate Change](#), Yale University, and the Journal of Industrial Ecology, the Global Commission on the Economy and Climate, and stakeholder coalitions contributing to the implementation of the Paris agreement (e.g. Global Alliance for Building and Construction).

Terms of Reference: Please refer to the Annex of this Work Programme.

3.2.2. PART II: LEVERAGING RESOURCES FOR A LOW-CARBON, CLIMATE-RESILIENT DEVELOPMENT

Proposed by: Edgar Hertwich

Suggested Working Group members: To be defined (potentially members from the Working Group for "Resource Efficiency and Climate Change: A request from the Group of 7).

Format: Thematic Assessment.

Rationale: The policy response to climate change must include both the adaptation to the climate change that is happening and effort to limit climate change by mitigating emissions. These topics have usually been investigated in isolation, except in economic models that try to identify the cost-optimal degree of climate change by juxtaposing the costs of emissions mitigations to the benefits in terms of avoided harm. Both adaptation and mitigation require natural resources, such as fuels, land, minerals, and biomass, and have implications on ecosystems and human health. In economic and population forecasts, these resource requirements and costs are often not included. Different

technology choices and management approaches will result in different resource requirements. Specific response strategies will depend on the availability of resources. Different adaptation approaches may cause emissions and affect mitigation to a varying degree. Response strategies may hence compete for the same resources or result in similar environmental impacts. In order to identify optimal policies, one has to look at both adaptation and mitigation at once. While energy system models start to include the resource implications of emissions mitigation (approaches based on the data developed by the IRP GHG1 report) such information is not yet available for non-electric technologies and adaptation.

Key Questions:

- What are the minerals, biomass, land, water and other natural resources required to meet the climate change challenge, addressing the needs of both adaptation and mitigation at the same time?
- What is the degree of competition for resources between adaptation and mitigation?
- Which choices are able to mitigate resource access problems and/or the impacts of resource use?
- What are the policy dimensions of resource use to consider in climate change adaptation and mitigation?

Scope and methodology:

This assessment would draw heavily on the scenario modeling capability developed for Part I. The report would assess:

- Resource demand for Climate Change Mitigation and Adaptation, addressing minor and major minerals, biomass, land, water and other factors.
- Potential resource constraints, substitute products, and trade-offs in a total-resource optimization framework.
- Environmental impacts of resource use for climate change mitigation and adaptation.

Provided there is sufficient data, the assessment would assess the resource requirements and environmental impacts of at least some or all of the top 10 GHG emitting countries (from both G7 and G20), who are responsible for more than 70% of total GHG emissions. These include China, USA, , European Union, India, Russia, Japan, Brazil, Indonesia, Canada, and Mexico¹².

Route to Impact:

Under the Paris Agreement, countries committed to (among other things):

- Keep the increase in global average temperature well below 2°C above pre-industrial levels;
- Aim to limit the increase to 1.5°C, since this would significantly reduce risks and the impacts of climate change;
- Undertake rapid reductions thereafter in accordance with the best available science;
- Strengthen societies' ability to deal with the impacts of climate change;
- Provide continued and enhanced international support for adaptation to developing countries.

This thematic assessment would provide useful information for G7 and G20 countries to enhance their adaptation and mitigation strategies through improved resource management. It would be prepared after the completion of the assessment "Resource Efficiency and Climate Change". A launch opportunity would be explored jointly with the IPCC at the at the 27th Conference of the Parties in 2021.

¹²Source: CAIT - Country Greenhouse Gas Emissions Data, World Resources Institute.

The IPCC would be involved from the inception of the report. A workshop with policy makers at the 25th Conference of the Parties in 2019 would be organized to develop the terms of reference.

Terms of Reference: To be developed following approval and further guidance by the Steering Committee on this high impact priority area.

3.3. HIPA 3: SOCIOECONOMIC IMPLICATIONS OF THE TRANSITION TO MORE RESOURCE EFFICIENT ECONOMIES AND SOCIETIES

The adoption of the United Nations 2030 Agenda for Sustainable Development symbolizes the international recognition of the inseparable nature of ecological, social and economic systems. While coherent and integrated policy-making is recognized as a fundamental requirement to achieving sustainability objectives, governance bodies at all levels (governments, civil society, the private sector) are burdened by a legacy of sectoral approaches and linear thinking; and are blocked by a lack of clarity on how to change.

The International Resource Panel has, for the past ten years, advocated for integrated and systems based approaches to solving the world's most pressing issues, through a natural resource management lens. Foundational Panel research looked first to individual resources and their life-cycles. More recently, the Panel's research has shifted to assessing production and consumption systems – including agricultural systems and urban systems for example. The Panel has also achieved high recognition and success when expanding its assessment of sustainable resource management to include economic considerations.

This high-impact priority area seeks to continue the Panel's evolution to more integrated 'systems' assessments by deepening its research into the interlinkages of sustainable natural resource management and socio-economic systems. While much of the Panel's research has focused on arresting the transgression of planetary boundaries while achieving economic development, this future research area proposes to systematically investigate how to do so while also maintaining the 'social floor' (or minimum level of dignity and wellbeing for all).

By more explicitly incorporating economic (including the blue economy) and social considerations into the sustainable management of natural resources, the research strives to enable environmental policy makers and practitioners to engage across social and economic policy spheres. It seeks to provide policy-relevant scientific knowledge on the interlinkages between natural resources, human wellbeing and economic prosperity to facilitate the integrated policy making required to transform production and consumption systems justly and equitably.

ROUTE TO IMPACT¹³

IRP provides a fact-based perspective on socio-economic implications of the transition towards decoupling and sustainable resource management, as well as recommendations on finance and investment system needed to accelerate change.

Objectives (short and long term)	Geographical focus	Target audience(s)	Services, products and tools	Key Performance Indicators to track impact
<ol style="list-style-type: none"> 1. Assess literature on sustainability transitions and their implications from a natural resource perspective, proposing policy options on transition connected to decoupling. 2. Describe finance and investment system needed for transformation to resource efficiency. 3. Analyze the distributional implications of decoupling strategies to build a deeper understanding of the efficiency-sufficiency nexus at sub-national, national, regional and global scales; and, to support the incorporation of issues of sufficiency and access, based on rigorous scientific evidence, into the global sustainability debate. 4. Evaluate the resource base underpinning the blue economy and identify possible governance responses to ensure the sustainable use of ocean resources. 	Global, but reports could focus on particular regions or countries.	The reports would each have their own relevant target audience. Overall, the following target audience is envisaged: Policy makers; Intergovernmental platforms (e.g., UNEA, HLPF, G7, G20), Intergovernmental research initiatives (e.g., IPBES, IPCC and the Global Sustainable Development Report), Industry platforms (ICC, WBCSD), civil society (media, Green 10, NGOs), private sector and finance sector in particular, and academia (International Council for Social Sciences).	<ol style="list-style-type: none"> 1. IRP assessment report, think pieces and rapid assessments. 2. Other communications products (including summary for policy-makers, factsheet, infographics, policy briefs, presentations). 3. Dissemination and outreach events (e.g. side events at inter-governmental meetings, policy dialogues, participation in conferences). 4. Capacity-building tools and workshops (e.g. massive open online course, training materials and workshops). 	<ol style="list-style-type: none"> 1. Download rates; utilisation / certification rates; number of references at major conferences and in major publications; 2. Feedback by policy-makers and other stakeholders at IRP meetings and in surveys.

¹³ Tailored elements of this route to impact may be proposed for the proposed topics.

The following topics have been proposed as part of this area:

3.3.1. TRANSITION TO A RESOURCE EFFICIENT ECONOMY

Proposed by: Mark Swilling, Helga Weisz, and Hans Bruyninckx,

Suggested Working Group members: Maarten Hajer, Tanya Abrahamse and Eeva Primmer, with others to be defined (Anders Wijkman, Salim Ali, Marina Fischer-Kowalski), noting the various actors already engaged in the field (*see 21 IRP Lima meeting report, and including: Telis Institute, Boston; Journal of Bioeconomics – Max Plank Institute in Germany and Griffith University in Australia; Angus Deaton Nobel Laureate from Princeton*).

Format: Think Piece

Rationale: The adoption of the Sustainable Development Goals (SDGs) and of the Paris Agreement within the context of a persistent global economic crisis has put the question of a just transition to a more sustainable and equitable world firmly on the global public policy agenda.

There is a widespread sense across the academic and policy community that:

- something fundamental needs to change;
- very rapid changes are already underway;
- most of the prevailing theories of change (which mostly originate from the c.19th) are inappropriate for a fast-changing and highly complex c.21st world.

At the same time, over the past decade scientific research on the dynamics of sustainability transitions has proliferated, as has the impact of the ever-expanding network of researchers that meets annually at the International Sustainability Transitions conference and other similar events.

The IRP has successfully documented the resource base of the industrial era and advocated the notion of decoupling as a framework for thinking about a transition. Drawing on the new literature on sustainability transitions, what is required now is a consideration of the environmental, economic, institutional and financial dimensions of the different potential transition pathways that present themselves in the literatures of a wide range of research and policy communities.

In line with the IRP's analysis that our current systems of production and consumption are fundamentally unsustainable, and will require systemic reconfiguration, it is essential to reflect more fundamentally on available or innovative and feasible governance mechanisms to steer (key components of) resource use in these systems in a fundamentally different direction, i.e. towards much higher resource efficiency and (in a number of instances) deep and rapid absolute decoupling. An increased understanding of the potential of different governance approaches, and the reasons for the failures of the currently dominant approaches, will further strengthen the potential impact and political relevance of the IRP, in line with previous reports, e.g. the report on Resource Efficiency prepared for the G7.

The piece will argue that transitions have happened before and can happen again; that visioning and learning are necessary but not sufficient to achieve a transition; and therefore attention must be directed to institutions and governance as drivers of transitions.

Key Questions:

- What are the different conceptions of transition/transformation to a more sustainable world?
- Which conception is most appropriate for IRP given the IRP's focus on material resource flows and decoupling?
- What are the more qualitative dimensions of alternative future economic, institutional and financial arrangements that will be required if such a transition is to result in a "transformed world"?
- What are the key governance drivers when it comes to natural resource use?

- What are the systemic mechanisms, and the associated governance, that result in strong lock-ins in unsustainable resource use? Can these be used to lock-in sustainable behaviours instead?
- What are cases of successful absolute decoupling and the governance approaches that instigated and maintained change in practices (including the case of the transition to renewable energy)?
- How can this analysis support the IRP to expand its mandate towards assessing the conditions for a just socio-metabolic transition that could realize what the preamble to the SDGs refers to as a “transformed world”?
- What underlying theory of change does this imply? How would a sustainability transition look like for the governance of natural resources?

Scope and methodology:

A sustainability transition is a socio-metabolic transition, i.e. a sustainability-oriented just transition towards a de-carbonized and resource-extensive (efficient) global society. To date, most theories of the sustainability transition have ignored global resource flows, and the temporal scale has tended to be limited to the industrial era. Three types of long-wave thinking about historical transitions should provide the baseline: socio-metabolic transitions starting within the agricultural revolution 15000 years ago and the industrial revolution 250 years ago (Haberl & Fischer-Kowalski); the five socio-technical transitions during the industrial era (Perez); and traditional Kondratieff cycles (growth and price cycles).

What is required is an integrated analysis of relevant theories about socio-metabolic historical transitions and an assessment of their implications. This will reveal how the dynamics of the current crisis and transition dynamics going forward are understood.

Transition narratives, theories and models include:

- **Narratives**: shared socio-economic pathways (SSPs), GEO6, GEA, IDS at Sussex.
- **Theories**: Schumpeterian long wave theory, transition management (Rotmans et al.), Multi-Level Perspective (MLP), socio-ecological transition (Fischer-Kowalski et al.), socio-technical transitions (Perez et al), Kondratieff cycles (Mason et al), WBGU (great transformation), EROEI (Energy return on energy invested), Just Transitions (Swilling et al), Energy Transition, Green Transformations (IDS, Sussex) etc.
- **Models**: integrated assessment models (IAMs) (e.g. Message, IMAGE, ReMIInd etc.), Limits to growth (World xx model), demographic models, CGEs, etc.

This would entail taking into consideration materials use and depletion, distribution of wealth and definitions of wealth, access to resources and the role of financial markets, recognition of actor-networks, the role of information and communication technologies, and spatial re-ordering exemplified in the transitional roles many cities are playing. At the centre of this analysis must be a re-consideration of what constitutes progress in light of resource depletion and declining EROEI (energy return on energy invested), and in particular the need to reduce dependence on GDP as the only measure of progress. The assessment could complement but not duplicate modelling exercises by considering the more qualitative dimensions of alternative future economic, institutional and financial arrangements that will be required if such a transition is to result in a “transformed world”.

Key aspects of the research will cover innovation and technology, and take the fourth industrial revolution as the starting context. The research will take the rise of renewable energy technologies as a case study on transitions.

The research will aim to focus on practical questions and solutions about leverage points, change agents and tools; and maintain the focus on the Panel’s primary objective: sustainable use and management of natural resources.

While much academic, think tank and policy work has been done on different elements of governance of environmental public goods and global environmental issues, there are still significant gaps when it comes to

certain themes, also relating to resource efficiency issues. The dominant approach has been based on statist approaches (policy approaches and instruments) and on efficiency gains in existing systems (often with a rather narrow technological focus). While this has enlightened the debate on certain parts of the governance debate (i.e. the use of taxes or price mechanisms), it also neglects some issues that are better captured in more recent schools of thought such as sustainability transitions, disruptive innovation, complexity science, private governance/authority, etc.

While not suggesting to discard the sound work done in the IRP and in many other studies, it is worth to reflect on more innovative ways to approach the governance challenge in resource use. Therefore, the work on governance could focus, inter alia, on

- an analysis of the systemic mechanisms, and the associated governance, that result in strong lock-ins in unsustainable resource use;
- the potential to use these mechanisms to create lock-ins for high resource efficiency and decoupling;
- the potential of effective governance approaches that do not originate mainly from public policy interventions and law-based target setting, but originate from interventions along the production and consumption chain;
- an in depth analysis of cases of successful absolute decoupling, with an emphasis on understanding the governance mechanisms that determined their outcomes and their potential to speed-up or scale up change.
- work on the potential for 'disruptive governance' or governance that facilitates disruptive technological, economic or social innovation (in parallel with potential disruptive technologies)

Route to Impact: A report that provides an overview of how transition/transformation is understood. This will provide the basis for the following:

- Internal (IRP) impact: Options for IRP Transitions Narrative to guide future research works of the IRP focusing on the conditions of an attainable and just socio-metabolic sustainability transition, substantiated by a think piece (or rapid assessment) report. This may need to relate to key interfaces to other IRP priority areas to be considered, namely climate change and resources efficiency and scenario modelling groups. The piece may also support the identification of change agents with which the IRP can collaborate in future endeavors.
- External impact: Policy-relevant recommendations for how national governments can respond to the SDG challenge to prepare for a 'transformed world', focusing in particular on the types of policy frameworks, institutional reconfigurations and transition management processes that may be required at national level (practical steps). This framework can impact further research and implementation of international agendas including the United Nations Agenda 2030 and its Sustainable Development Goals, the Paris Climate Agreement, United Nations Framework Convention on Biological Diversity, and others which require an integrated approach for long-term success.

This type of analysis of potential governance approaches is needed as the current incremental and non-systemic approaches are increasingly understood as not having the necessary potential to provide enough dynamic to steer systems of production and consumption away from fundamentally unsustainable resource use. If we want to move beyond the efficiency paradigm, understood as marginal efficiency gains in the current dominant systems, and create the dynamics for a systemic transitional approach, we will need transitions not only in technology, but also in our understanding of how to 'steer' society in the direction of desired macro-societal outcomes, in this case (fast and deep absolute) decoupling.

For policy-makers, the report will provide a useful overview of the relevant literature, and draw in a conception of governance that expands the role beyond governments as change agents, while providing frameworks for integrated planning and governance. Overall, it will enable policymakers to make sense of the changes that are already happening, and provide the means to leverage and manage them strategically.

Terms of Reference: To be developed following approval and further guidance by the Steering Committee (based on additional information to be shared at the 21st Meeting of the IRP) on this high impact priority area.

3.3.2. MANAGING THE WORLD'S NATURAL RESOURCES FOR THE BENEFIT OF ALL: CONCEPT NOTE ON DISTRIBUTIONAL EFFECTS OF DECOUPLING AND RESOURCE EFFICIENCY

Proposed by: Ashok Khosla, Development Alternatives.

Suggested Working Group members: Anu Ramaswami, Eeva Primmer, as well as the following recommendations from the Panel (tbc): IIASA - Namasi Araou; Julia Steinberg; Klaus Uberchikt – carbon impact of distributional issues; Santa Fe institute – Sam Bowles; University of Massachusetts - James Boyce).

Format: Thematic Assessment.

Rationale: The conceptual framework of decoupling resource use and environmental impact from GDP growth, promoted by the IRP, supports the global vision for a sustainable future for all of the United Nation's Agenda 2030, its 17 Sustainable Development Goals, and relevant key strategies¹⁴ for implementation [including sustainable production and consumption (SDG 12, SDG 8) and decarbonizing growth (Paris Agreement, SDG 13)].

The thrust of these international commitments boils down to two fundamental priorities: the first is to ensure that all citizens have access to the means of satisfying their basic needs; the second is to evolve practices that bring the environmental resource base, on which their lives and futures integrally depend, back to its full health and long-term potential productivity.

To achieve these priorities requires urgent action on two fronts, through international commitment to:

- *Efficiency in production systems*, as the primary means of reducing the pressure on natural resources, particularly by reducing wastes and;
- *Sufficiency in consumption behaviours/ patterns*, as the necessary goal to ensure that all citizens have access to enough resources for a decent life without transgressing the various planetary boundaries and limits now and for future generations.

Today's production systems offer large opportunities for raising efficiency at little marginal cost and even improved overall economic performance to enable producers and consumers to get much more with much less. Resource efficiency is thus a "good", delivering "triple win" outcomes for the economy *and* for society and the environment. The push for efficiency is a "low hanging fruit" to be pursued in international arenas.

The first decade of the International Resource Panel has been almost entirely devoted to elucidating the opportunities for decoupling resources from economic progress¹⁵, and the prime means of doing this is to promote innovation and policies for raising resource efficiency.

¹⁴ UNEP – IRP reports on decoupling natural resources and environmental impacts from economic growth.

¹⁵ Decoupling describes a situation in which resource use or some environmental pressure either grows at a slower rate than the economic activity which is causing it (relative decoupling) or declines while the economic activity continues to grow (absolute decoupling). The concept of decoupling which shows increasing trajectories for GDP *and human well-being* such as might be implied by the achievement of the SDGs. The ideal goal of resource efficiency through the notion of decoupling is that economic output *and human well-being* will increase, at the same time as rates of increasing resource use and environmental degradation are slowed, and in time brought into decline to levels compatible with planetary boundaries, thereby enabling resource use and the delivery of ecosystem goods and services to be sustained for future generations.

However, decoupling measures alone are unlikely to result in enabling the poorest to achieve acceptable standards of well-being as envisioned in Agenda 2030. The possibility for sustainable development is undermined if the economic and social disparities in a society are large. Increasing social equity – and eradicating poverty – thus, becomes a primary instrument for environmental and resource conservation. Measures aimed purely at raising resource efficiency will have inherent limits and lead to missed opportunities¹⁶. In absence of sufficiency policies, efficiency gains are cornered by the few and may lead to increased and unsustainable consumption patterns¹⁷.

Some members of the Panel and the Steering Committee feel that it is now becoming necessary to analyze the distributional implications of its findings and recommendations on raising resource efficiency and decoupling strategies.¹⁸

The need for sufficiency (“raising the floor”, “at least enough for survival”) at the lower end of the economy (where the poor and marginalized live) is self-evident for any society that aims at being socially just. The need for sufficiency (“lowering the ceiling”, “enough is enough”) at the upper end of the economy may be less comfortable for those in the wealthier social strata, but needs to be recognized as a logical consequence of a finite natural resource base and planetary boundaries.

Despite several decades of advocacy for alternative economic models, the global economy and most national economies are still ruled by a virtually total reliance on the paradigms of GDP and economic growth¹⁹. While GDP and other conventional indicators of economic progress will no doubt continue to be important inputs to decision-making, we now need also to incorporate measures of other social and environmental outcomes of economic activity to obtain a better understanding of what is the degree of genuine human progress. This science, often termed “full-cost accounting” is still in its infancy and needs to be rapidly advanced if costly, possibly irreversible, changes in the biosphere and the socio-sphere that sustain us are to be avoided.

Every day, we see the conflicts between different sets of – otherwise desirable – social objectives where policies designed to solve immediate problems end up by creating bigger, less tractable problems later. Examples are common of counter-intuitive and countervailing impacts of well-intentioned but narrowly conceived policy decisions. They often have equally significant negative impacts on society and particularly the poor.

Could any of these unintended outcomes have been avoided? Given the complexity of human and social systems and the inadequate state of scientific knowledge, perhaps not all. However, it is becoming clear that

¹⁶ James D. Ward, Paul C. Sutton, Adrian D. Werner, Robert Costanza, Steve H. Mohr, Craig T. Simmons: Is Decoupling GDP Growth from Environmental Impact Possible? <https://doi.org/10.1371/journal.pone.0164733>, October 14, 2016

¹⁷ https://www.degrowth.info/wp-content/uploads/2015/08/Degrowth2014_Hennicke_Decoupling-resource-consumption-and-economic-growth.pdf

Resource efficiency models are unlikely to address the unintended consequences of conflicts of resource use, transference of environmental burden in space and time due to rebound effects of resource-energy nexus. It has been argued that decoupling has often meant resource substitution – which may have a consequence of delayed impacts or shifting the burden in time, space and on stakeholders – thus being inherently iniquitous. They are also unable to respond to spatial boundary limits for resource movement, beyond which resource efficiency gains become counter-productive with increased and distant environmental impacts and local job losses.

¹⁸ Table 1 (refer to ANNEX), adapted from an earlier IRP publication, clearly demonstrates the importance of getting the balance between efficiency priorities and sufficiency imperatives, which are the corresponding strands of the environment and equity dimensions of the sustainability equation.

¹⁹ GDP itself is a poor proxy-indicator of human well-being; also, environmental true cost integration into GDP is inadequate as the implication of distribution of benefits and or of impacts of resource extraction, production and consumption are often (in)equitable and linked to local, national and even global conflicts. Finally, the “financialization of some components of the GDP – that lead to enhanced monetary flows, without a simultaneous increase in energy or material throughput”, and finally the decoupling strategy does not affect the increasing separation of production and consumption - which is probably an aspect that impacts distributional inequities in benefits and impacts. Reliance on GDP measures to define national progress leads to policy strategies that enhance consumption.

we need better tools to minimize such mistakes in the future. Such tools are in their infancy but becoming more available because of academic research and some corporate application.

Scope and methodology: While acknowledging the existence of competition for finite natural resources and the divergence in perceptions of self-interest, the issues of sufficiency and access now need to be introduced more effectively, and based on rigorous scientific evidence, into the global agenda seeking to bring about a more sustainable future. The second decade of IRP's life offers an excellent platform to do this.

In present circumstances, the world's developing nations do not have the luxury of available "safe operating space" to become rich first and then clean and efficient. Therefore, it is necessary that along with technological and fiscal fixes to achieve decoupling of resources and environmental impacts, "sustainable consumption" practices be promoted through clearly designed global trade and national economic policies, such that there is a convergence of efficiency and sufficiency factors to stabilize overall growth (possibly requiring lower natural resource use rates in certain societies) along with improvement in genuine progress overall²⁰.

It is therefore proposed that the IRP initiate a new work stream to build a deeper understanding of the efficiency-sufficiency nexus at sub-national, national, regional and global scales for developing and developed countries.

Key Questions: The workstream could answer the following questions amongst others:

- What are the distributional implications, across space and time (intergenerational) and across stakeholders and societies (distribution between countries), of resource efficiency gains from decoupling strategies for developing and developed countries? [As possible, in comparison to distributional impacts of resource use overall].
- What is the relationship between social and environmental gains in different policy scenarios, at different scales of operation and across economies in different stages of development (and including for resource exporting/importing countries)?
- What are the impacts of power dynamics, institutions, and a rights based approach on decoupling?
- What would define the characteristics and an optimum ratio of manufacturing to services in an economy for maximising the potential of socio-economic and environmental benefits and minimizing trade-offs, taking into consideration IRP work on orientation values for natural resources?
- What tools can policy makers consider when taking difficult decisions under conditions of growing complexity, rapid change and significant uncertainty in the systems – political, social, economic, environmental or technological – that they must deal with daily? What are the best practices and case studies of these across geographies and economic scales?
- What are the implications/outcomes of these findings for economic theory (especially general equilibrium models)?

Route to Impact: The workstream will:

- a) Expand on why it is important to bring in the social dimension into environmental and economic policy-making (rational and importance of addressing inequalities for sustainable development) and look into how (tools) to do so rigorously (e.g. cost accounting, systems thinking, others).
- b) Present data on the distributional impacts of resource (in)efficiency (historically, and projections as far as possible of differing scenarios); or, examine differing frameworks that have attempted to do so in a systemic way and their results (as it seems the field is yet evolving).

²⁰ https://www.degrowth.info/wp-content/uploads/2015/08/Degrowth2014_Hennicke_Decoupling-resource-consumption-and-economic-growth.pdf

- c) Present some good-practice examples and policy-relevant recommendations of how the social dimension has been taken into consideration in making/implementing policies for resource efficiency/sustainability objectives, and on how this can be improved moving forward.
- d) Inform integrated approaches at intergovernmental bodies working on sustainable development (HLPF, UNEA).

Terms of Reference: To be developed following approval and further guidance by the Steering Committee on this high impact priority area.

3.3.3. RESOURCES AND FINANCE: THE COST OF RESOURCE EFFICIENCY AND THE FINANCE AND INVESTMENT SYSTEM WE WANT FOR TRANSFORMATION

Proposed by: Michael Obersteiner, Paul Ekins

Suggested Working Group members: Maarten Hajer, and Columbia Centre for Responsible Investment (tbc). Others to be defined.

Format: Thematic Assessment.

Rationale: There are three possible sources of cost reduction from stimulating increases in resource efficiency:

- The cost savings from the more efficient use of resources itself, and associated greater profitability and competitiveness of firms and the economy at large;
- Reduced risk premia as a result of using fewer resources per unit of value generated in the face of supply shocks (e.g. from depletion, mis-timing of investment or geo-political factors) and associated price volatility;
- The reduced costs related to environmental damage that is often associated with resource extraction, processing and disposal.

To get a sense of the economics of resource efficiency, these benefits need to be compared with the economic costs of policies (corporate or public) to increase resource efficiency, and any associated investments in research and innovation and/or equipment that are necessary to realize the resource efficiency improvements. This comparison needs to be specified in monetary as well as non-monetary terms (e.g. in respect of environmental improvements) and be made attributable to the entities to which the costs accrue and who need to make their specific cost-benefit assessments. In particular, the choice of policy instrument will determine who has to carry which cost share from a Resource Efficiency policy change. For example a resource use tax is a cost to a producer or a regulated sector, but is a revenue to the government, which it could recycle back to the same sector for modernization of production or spend for other purposes. The costs to the country equal the change in GDP once the economy has adjusted to these changes, which would be expected to be considerably smaller than the sum of the costs flagged by the regulated entities.

It is now fairly well understood in general terms why firms do not always take up existing cost-effective measures for resource efficiency, but not so well understood as to what needs to be done to make such measures more obvious to individual firms, especially SMEs, so that their take up is increased.

Resource efficiency requires a tailored finance approach depending on who is targeted to achieve desired impacts. From the perspectives of an individual producer, economic sector or government entity the specific finance requirements can be assessed based on micro-economic principles. For large-scale deployment of resource efficiency projects de-risking investments vis-à-vis regulatory and policy uncertainty is probably the single most important issue to be tackled. This is not only because of its impact on expected implementation costs and potential impacts on revenues, but also because Resource Efficiency projects usually come with evolving target setting and costly monitoring and evaluation (M&E) obligations within wider sector specific Resource Efficiency frameworks.

The design and oversight of the finance system to deliver resource efficiency outcomes in the “real” economy are important issues to be tackled. Traditionally governments have provided interest rate subsidies to capital-

intensive long-term projects to de-risk and foster sector-specific resource efficiency programmes aiming at accelerated diffusion of best available technologies. Today, such programmes are either supplemented or gradually substituted by more private capital-based financial instruments such as green bonds, which are typically designed, issued and guaranteed by public financial institutions (e.g. EBRD) and accompanied by public-private partnership agreements. These new instruments help financial institutions to report on and comply with their own obligations on environmental and ethical performance (e.g. Norwegian sovereign wealth fund).

In particular there is a need to assess the (1) sufficiency of capital supply to attain resource efficiency targets; (2) efficiency, alignment and effectiveness of policies and consisting of multiple policy instruments to deliver outcomes. The latter refers to the issue that benefits may accrue to different parties entirely from those who need to make the investment (e.g. the landlord/tenant problem), removing the incentive for the investment to be made at all calling for a re-alignment of investment incentives.

Scope and methodology:

The research will look at resource efficiency through a practical lens, focussing on best practices, barriers and policies across two main areas: finance and innovation. The second aspect of the work is to put in practice the notion of partnership in the development of the IRP research by working closely with relevant private sector platforms including the World Economic Forum, SystemIQ, UN Environment Finance Initiative, and Ellen MacArthur Foundation among others.

The research stream proposes to assess the cost structure of resource efficiency to individual sectors (and/or firms) vis-à-vis the macro economic implications of resource efficiency measures. Further, the IRP can provide guidance for methodological support to assess de-risking Resource Efficiency projects/programmes as well as provide access to (bio-)physical resource efficiency indicator data to inform existing and emerging financial instruments targeted at Resource Efficiency. In this way, the research proposes to not only bring to light the financial challenges that sectors (private companies) will face in implementing resource efficiency measures, but also develop a framework whereby governments can assess the appropriate level of political certainty and signals required to send a strong message of support to firms to undertake transitions despite the cost implications.

Many governments and consultancies have valuable experience in understanding how and why resource efficiency measures are (or are not) taken up by the private sector. These experiences are fragmented and disorganized. There is scope for work to pull these experiences together into a comprehensive evidence base for decision support to improve resource efficiency, on the basis of what has worked (or not) in specific contexts and situations across different stakeholder groups.

The work should leverage the enormous amount of existing research on clean energy finance and finance for ecosystem services; the Green Finance and Circular Economy initiatives and discussions in the policy domain; the United Nations Principles of Responsible Investment; and support the practical implementation of the Paris Agreement INDCs and the necessity to meet those commitments, which is especially relevant for developing countries who are identifying the best pathways to achieve those objectives.

The research will focus on the key sectors that were identified in the IRP's Resource Efficiency: Potential and Economic Implications (2017) report as having the most potential for increased resource efficiency. It will identify for each sector the major barriers that stop firms in those sectors from taking advantage of resource efficiency opportunities. It will then identify the policy approaches that have worked, or that might work, in order to reduce or remove these barriers.

Insofar as it is revealed that a major barrier to uptake of resource efficiency measures is the availability of finance, or the conditions under which it would be provided, the research will make suggestions as to how this barrier may be overcome, starting from the knowledge base in this area generated by the UNEP Financial

Inquiry, and exploring the potential roles of both private finance and finance provided by the public sector, and the institutions through which it could be delivered.

Key Questions

- While resource efficiency provides positive impact for the macro-economy, what are the economic costs of resource efficiency policies to individual sectors (and/or firms)?
- What policy measures (policy signals) are required to mainstream uptake of resource efficiency measures by private entities?
- What are best-practice examples (and financial instruments, including those proposed by the UN Environment Financial Inquiry) that have been used to support the successful uptake by private entities of resource efficiency measures and investments?

Route to Impact:

This research aims to deliver a practical outcome focused on best practices, barriers (including costs) to achieving resource efficiency/circular economy; and how to overcome those barriers through policies across two main areas: finance (including green finance) and innovation. The research is directly relevant at the policy level in delivering on both the transformation to sustainable consumption and production systems (SDG 12) as well as to SDG 8 (and target 8.4 on decoupling). The research could also be linked to research on the implementation on Intended Nationally Determined Contributions under the Paris Agreement. The framework proposed could be used by private entities to understand the impact of policy certainty on their resource efficiency investment opportunities (and be developed in close cooperation with them to ensure impact). Conversely, policy makers can use the framework to assess the most effective level of policy intervention to encourage investments from individuals and firms in resource efficiency. By working alongside private sector partners or coalitions (ICC, WBCSD) the research can support productive conversations between the private sector and policy makers on resource efficiency at dedicated forums.

Terms of Reference: To be developed following approval and further guidance by the Steering Committee on this high impact priority area.

3.4. HIPA 4: SUSTAINABLE RESOURCE MANAGEMENT LINKS TO MIGRATION AND CONFLICT

Proposed by: This topic emerged through a demand-side analysis of the stated thematic policy priorities of the IRP's key audience platforms (namely, the G7, G20, European Commission, and World Economic Forum). Norway also suggested that the IRP's future work programme should be aligned with UN Environment's Medium Term Strategy, with resilience to disasters and conflicts presenting one of its central areas of focus. The broader topic of governance of natural resources was recommended by a number of IRP members (Edgar Hertwich, Elias Ayuk, Switzerland, World Business Council For Sustainable Development) and external experts (Aidan Davy - ICMM, Ann Dom – Seas at Risk) who were consulted.

Potential working group members:

- IRP Members (interest confirmed): Saleem Ali, Elias Ayuk, Vijay Kumar, Anthony Chiu, Stefan Brinzeu; (interest to be confirmed): Maarten Hajer
- IRP candidates (interest confirmed): Iyenemi Ibimina Kakulu
- Strategic Partners: Irene Schöfberger (ICSU)
- External Members (interest confirmed): Oli Brown and other colleagues from Ecosystems Division & Policy Division of UN Environment
- External Members (interest to be confirmed): Hania Zlotnik (UN-DESA), Saskia Sassen (Columbia University), Dominic Kniveton (University of Sussex), experts identified by Saleem Ali at Princeton University, University of Queensland, and the Hebrew University.

The above is a non-exhaustive list, with many more relevant experts to be identified on this topic. The expertise within the Panel will need to be broadened in order to carry out a meaningful and original assessment on this topic. While it is premature at this stage to identify specific experts, it is nevertheless clear that the Panel will need to engage more social scientists (including political economists) with particular expertise in the areas of migration and conflict. Civil society representatives should also be engaged. Relevant networks and stakeholders consultations can be used to identify appropriate experts.

Format: Thematic assessment and related communication products (e.g. summary for policy makers, policy briefs, fact sheet, infographics, video, interactive map, training material).

Rationale: ²¹ Human-induced environmental change and degradation alongside the depletion and mismanagement of natural resources can depict root causes of many socio-economic and political drivers that ultimately lead to conflict and forced migration.

For instance, a UN Environment study found that natural resources play an important role in at least 40 percent of all civil wars over the past decades, and conflicts associated with natural resources are twice as likely to relapse into conflict in the first five years.²²

Whilst conflict can lead to the mass exodus of people from an area or country, human-caused environmental degradation such as deforestation, land degradation, climate change and water scarcity can also prompt large-scale population movement. A frequently cited figure is that there could be circa 200 million “environmental refugees” or “climate change migrants” in 2050.²³

The nexus between natural resources, conflict and human mobility is complex and links between each of these run in many directions with multiple possible pathways. At the very least, the causality runs both ways, as conflict and population movement can also damage the environment.

Therefore understanding the ecological drivers of conflict and of human mobility is a valuable and necessary endeavor to devise appropriate policies and approaches to help address the causes underpinning and propagating conflict and displacement, as well as to better manage and benefit from migration²⁴. Action is needed by governments and development agencies to both *respond* to situations of conflict and displacement as well as to *prevent* these in the first place.

Key Questions:

Depending on the focus of an assessment on this high impact priority area, one or more of the following research questions could be relevant:

²¹ This sub-section draws on a forthcoming book chapter by Oli Brown and Brian Wittbold titled “Human Mobility in the Anthropocene: Perspectives from UN Environment”.

²² UNEP (2009). *From Conflict to Peacebuilding: the role of natural resources and the environment*. Geneva.

²³ Myers, Norman, ‘Environmental Refugees: An emergent security issue’, 13th Economic Forum, May 2005, Prague. <http://www.osce.org/eea/14851?download=true>

²⁴ For the purposes of this note, human mobility is used as an overarching umbrella term that refers to three forms of population movement: i) Displacement – the primarily forced movement of persons; ii) Migration – the primarily voluntary movement of persons; and iii) Planned relocation – process of settling persons or communities to a new location (UNFCCC Decision 1/CP.16 Cancun Climate Change Adaptation Framework Paragraph 14f). Of note is that migration, if well managed, can act as a positive driver of human and economic development.

- What are the interlinkages and pathways between natural resource availability/management and conflict and/or migration? When does environmental degradation lead to migration, displacement or relocation? In other words: how do socioeconomic factors and contextual variables (including policies) contribute to determine who migrates, how and where?
- What resource risks can be identified that could lead to or aggravate a situation of conflict and displacement?
- How is environmental degradation and environmental governance likely to shape future migration patterns around the world?
- How can migration strengthen or weaken the resilience of persons living in environmentally degraded regions?
- How can resources be shared and used more efficiently and sustainably so as to address and prevent conflict and displacement?

Scope and approach:²⁵

Natural resources and conflict

Broadly there are two pathways to research around resource-based conflicts, across the spectrum from natural resource abundance to scarcity.

Abundant natural resource wealth can attract a range of nefarious activities that in turn can lead to conflict and insecurity – this is colloquially referred to as the “honey pot” problem and is emblematic of countries such as the Democratic Republic of Congo.

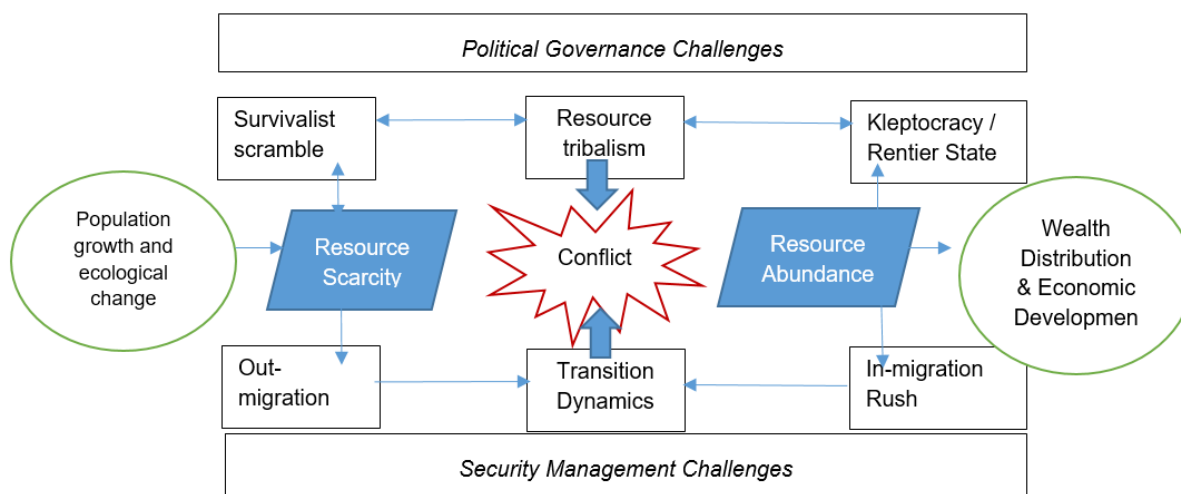
On the other end of the spectrum, natural resource scarcity can also lead to a “tragedy of the commons” whereby high population and scarce resources lead to conflict and insecurity, colloquially referred to as the “shrinking pie” problem. Desertification linked to population pressure and errant management leading to a decline of available natural resources in places such as Darfur may be an example of this causal pathway. Human population movements are an essential conduit whereby natural resource scarcity gets operationalized into conflict and insecurity.

There is a polarized set of pathways which are deliberated in research within this arena (see Figure 1). Ultimately, a mismanagement of natural resource abundance can itself lead to resource scarcity.

Researchers recognize that there should always be space for constructive conflict that facilitates positive social change. It is also important to note that in the absence of conflict causality, natural resource sharing can lead to cooperative outcomes through appropriate governance and security mechanisms. This diagram considers the *destructive* conflict pathways, while assuming that these are by no means deterministic, and cooperative outcomes can indeed be found when resources are scarce as well as when they are abundant. Indeed, the goal of any effective applied research should be to consider when and where cooperative approaches that promote sustainable development can be found.

Figure 1: Pathways linking natural resource availability, conflict, security and migration based on the broad spectrum of literature that exists across multiple disciplines.

²⁵ This sub-section largely draws on text provided by Saleem Ali, Irene Schöffberger and Oli Brown.



Source: Saleem Ali (2017). *Structural (non-citation) assessment of literature on natural resource management and security, conflict and migration*. Prepared for the IRP Steering Committee. 4 September 2017.

The scientific research on this topic can be delineated as follows within five key arenas:

- Population ecology research on speed of resource depletion as a function of environmental and social change and its concomitant impact on human settlement behavior.
- Resource economics and quantitative political science research utilizing regression methodologies to consider causal pathways between resource availability and conflict ('resource curse theories' have been an outgrowth of this genre of research).
- Qualitative political science and sociology research focused on institutional aspects of governance which can manage natural resource endowments more effectively.
- Security mechanisms research informed by operational tactics and strategies for managing natural resource wealth supply chains
- Research on ways by which natural resources can be shared, used more efficiently and can lead to cooperation between antagonistic communities.

The topic of conflict and its links to natural resources has received considerable attention in the literature. This includes notable effort expended by the research community to assemble data sets at the national level which consider environmental scarcity and conflict. A useful compendium of these data sets with links to the data sources has been assembled by ETH in Zurich and can be accessed [online](https://www.ethz.ch/content/specialinterest/gess/cis/center-for-securities-studies/en/services/datasets.html).²⁶ A dynamic bibliography on the broader literature on natural resource conflicts and peace-building is maintained by a consortium of research institutions in partnership with UN Environment and is also accessible [online](https://environmentalpeacebuilding.org/library/).²⁷

The topic of natural resources and conflict also dominated the discussions on this high impact priority area during the break-out groups at the 20th IRP Meeting in Helsinki, with little attention paid to the particular issue of migration. During the Helsinki meeting, it was suggested to review the literature to understand **how natural resources contribute to conflict and migration** – looking at temporal, agency and spatial dimensions. It was further proposed that the IRP could develop a **framework to assess resource risks and conflicts** from a preventative point of view; identifying what can be done in terms of policy improvement. A so-called (P)SODSI

²⁶ <https://www.ethz.ch/content/specialinterest/gess/cis/center-for-securities-studies/en/services/datasets.html>

²⁷ <https://environmentalpeacebuilding.org/library/>

((Prevention), State, Opportunity, Driver, Strategy, Impact) framework could be used to arrive at integrated outcomes (Maarten Hajer):

- **State:** Start with the unsustainable present
- **Opportunity:** Identify possible pathways
- **Drivers:** Analyse which aligning forces can be identified
- **Strategy:** Show ways of making this into an operational policy approach
- **Impact:** We give an impact assessment of the potential impact

In this context, a quantitative assessment of **cumulative “trouble spots”** could be useful (ibid). The overall approach would build on existing work²⁸; and would also look at the impacts of conflict and migration on natural resources, and how sustainable resource management can aid the transition to a post-conflict situation and contribute to peace building.

Natural resources and migration

While there is considerable research on the broader linkages of natural resource scarcity, conflict and peace-building, the **research on migration patterns linked to resource availability** is still quite nascent. Given the recent crisis of migration flows into Europe from a variety of locations with a range of environmental security challenges, this arena of research holds considerable salience and may be the most appropriate focal area for involvement by the IRP (Saleem Ali).

In this context, an interesting and novel area that the IRP could explore is **how environmental degradation is likely to shape future migration patterns** around the world, and **how environmental governance can help prevent forced migration and strengthen the resilience** of affected communities. A study on this topic could look at how environmental/resource governance is rapidly changing in the new economy – as shaped by rapidly growing economies and populations, technological change and greater automation, human-induced climate change, and so on – and what implications these shifts could have for population movements in the near and long-term future. It could examine and recommend environmental governance solutions to both prevent and respond to large migration flows driven by environmental degradation and a changing climate (Oli Brown). Examples include:

- Great Green Wall of the Sahara and the Sahel Initiative by the African Union to combat the effect of climate change and desertification (ibid)
- Revitalising the Iraqi marshlands to support human survival and economic livelihoods (ibid)
- USD \$50 billion dollar proposal for recharging of drying Lake Chad through the diversion of rivers in the Congo Basin

In assessing the environment-migration nexus, a number of key issues should be taken into account (Irene Schöffberger):

- The concept of environmental migration is debated. In particular, critics underline that it assumes a direct relationship between environmental degradation and migration, whereas migration usually results from a complex combination of environmental, economic, social and political factors.

²⁸ (e.g. that relating to intergroup relations and conflict (IGRC) and peace-building and conflict management (PBCM), and link to the UN Secretary General’s conflict prevention approach)

- Environmental degradation does not automatically lead to migration. In particular, vulnerable households – which are particularly exposed to environmental degradation – may be unable to afford the costs related to migration and therefore “trapped in immobility”.
- Migration from environmentally degraded areas is not necessarily an escape strategy. Instead, mobility has for a long time already represented a basic coping strategy in resources-poor regions and it is still a basic adaptation strategy to environmental degradation. For instance, the emigration of individual household members allows members remaining in villages to complement scarce earnings in case of bad harvest seasons.
- Migration is often decided at household level. It is therefore important to analyse it jointly with the other strategies adopted by households to cope with environmental degradation, such as the diversification of local income-earning activities.
- Environmental degradation can take many forms (e.g. slow-onset degradation and natural disasters). There is thus a need to also assess the factors that determine the exposure of individuals and households to its effects: for instance, poor farming households relying only on agriculture tend to be particularly exposed.
- Environmental migration can take different form: for instance, it can be internal or international, short-term or long-term, voluntary or forced. The choice of migration forms and destinations is highly dependent on the socioeconomic situation of sending households and on contextual variables, such as migration policies and environmental governance. It must also be noted that in most cases environmental migration is internal or directed to neighbouring countries. With regard to the migration-environment nexus, a distinction is often made between migration, displacement and relocation.

Such research on migration can be informed by both *quantitative* methodologies utilizing spatial data and population flow models as well as *qualitative* techniques such as focus group discussions with migrants to understand drivers of these migrations (Saleem Ali, Irene Schöffberger, Oli Brown).

Options for the quantitative analysis include the use of:

- Regression analysis which examines the association between migration flow variables and particular ecological stresses, whilst controlling for a series of other variables (Saleem Ali).
- Data analysis of migration flow patterns and environmental indicators using geographic information system (GIS) techniques (Saleem Ali).
- The development of scenarios based on possible interactions of the main drivers and context variables and on different policy options. These scenarios could be illustrated graphically through an interactive world map (Irene Schöffberger, Oli Brown).

It should be noted, however, that any empirical analysis of the impacts of environmental and climatic change on human population distribution is characterised by a large degree of inherent uncertainty. For instance, predictions of the number of ‘climate change migrants’ by 2050 vary between 25 million and 1 billion people according to different estimates. This is owing to the uncertainties in climate/environmental science, the lack of reliable data on migration, and the difficulty of disentangling the impact on non-environmental factors in migrants’ decisions, and of the ongoing trends of rapid population growth and urbanisation (Oli Brown²⁹).

²⁹ Brown, O. (2008). “The numbers game”. in Refugee Studies Centre. Force Migration Review: Climate Change and Displacement. <http://www.fmreview.org/sites/fmr/files/FMRdownloads/en/FMRpdfs/FMR31/08-09.pdf>

Given the high levels of uncertainty, such quantitative techniques should be complemented and partly validated by qualitative data and methods. This is important to also analyse issues - both problems and solutions – through the lens of the poor, vulnerable and marginal sections of society (Vijay Kumar).

The qualitative component of the analysis could take the form of case-studies that could be structured as follows (Irene Schöffberger):

- Analysis of 5 case-studies: 5 countries selected as representative for 5 types of environmental degradation (including slow-onset degradation and natural disasters)
- 2-3 research sites selected for each country.
- Each case-study could be investigated in collaboration with a local research institution. At the same time, a shared methodological framework would ensure the comparability of results. Participatory data collection methods could ensure the implication of local stakeholders such as formal and traditional authorities and farmers' associations in the identification of research needs and the interpretation of results.

In each research site, transdisciplinary research teams could investigate how environmental degradation impacts local livelihood strategies, e.g. by focusing on the following relevant aspects:

- the role of natural resources for local livelihood strategies
- access to natural resources (including formal and traditional environmental governance systems, changing land tenure rights, land grabbing and gender bias)
- environmental degradation (including soil degradation, biodiversity losses, natural and human-induced influences)
- exposure to the effects of environmental degradation (including livelihood diversification possibilities)
- migration forms, destinations and duration
- access to migration (including perception of costs and benefits, financing of emigration, national and international policies)
- the role of remittances for local livelihood strategies, for the access to natural resources and for the resilience of households

Analytical methods to develop the case studies could include quantitative household surveys, qualitative interviews, focus groups and mapping exercises. Additional methods could be identified for the assessment of environmental degradation.

Based on the fact that environmental migration is both an individual and a collective strategy, the focus could be simultaneously on the individual, on the household and on the community level. In order to assess mobility versus immobility possibilities, it would furthermore be important to include households not counting migrants amongst their members in the analysis.

Interviews with migrants from the research sites could be conducted through home visits or through skype. In addition, and depending on available resources, it could be interesting to conduct additional field researches in migration destinations. This would allow to investigate how factors influencing migration choices in the places of origin influence the actions undertaken by migrants in their places of destination to contribute to environmental resilience in their home places.

Due to the impossibility of including all migration destinations in the analysis, an exploratory study of one migration destination per case study could be done. In this case, the selection could be based on which destination is the most common in the assessed research sites. Ideally, the five migration destinations would also be representative for different types of environmental migration. (Irene Schöffberger)

Overall, by better understanding how climate change and environmental degradation could affect population movements, this study can help inform and even propose effective governance response options for both preventing forced migration, and dealing with its possible consequences such as social and economic dislocation, delayed development or conflict (Oli Brown).

Route to impact: As mentioned above, this high impact priority area was highlighted not by internal members, but through a desktop analysis of the thematic policy priorities of the IRP's main audience platforms. It is therefore in line with the stated commitment of the IRP to follow a demand-driven approach to selecting its priority topics in order to better serve the needs of its target policy-makers and other stakeholders.

The international community has long concerned itself with intra- and inter-state conflicts, which are always high on the international political agenda (e.g. of UN General Assembly and Security Council), given the high costs involved in terms of loss of human life and threat to global security. The UN Secretary General, António Guterres, has called for a UN that works together more effectively to prevent conflict and sustain peace as the organisation's priority. In this context, UN Environment, which has long engaged in the area of disasters and conflicts, is stepping up its work on environment and security, by supporting better environmental governance in counties experiencing or emerging from conflict.

Issues relating to human mobility are also currently high in the list of global political priorities, not least owing to the refugee crisis caused by ongoing and protracted conflict in the Middle East. The topic of migration is presently a priority area of focus for many groups of countries and political fora such as the European Union, Group-of-Twenty (G20) countries, Group-of-Seven (G7) countries, and the World Economic Forum. At the UN, the New York Declaration for Refugees and Migrants adopted in September 2016 sets in motion a process to develop a Global Compact for Safe, Orderly and Regular Migration (CGM). The 2015 Paris Agreement on Climate Change also offers a new mandate to address displacement related to climate change through the establishment of a dedicated task force to develop recommendations on this

An assessment by the IRP on the theme of natural resource links to conflict and/or migration could thus inform and feed into the above important political/policy processes; for instance, by providing analysis and guidance on how more sustainable management of natural resource can prevent conflict and displacement, aid in peace-building, and manage the negative impacts of migration.

In developing the report, the IRP could partner with another research institution/think tank or other team in UN Environment (e.g. the Disasters and Conflicts Team) that are working in this field.

It should also collaborate with relevant international organizations engaged in this area such as the UN International Organization for Migration (IOM), the United Nations High Commissioner for Refugees (UNHCR), the UN Department of Peacekeeping Operations (DPKO), United Nations Convention to Combat Desertification (UNCCD), and the UN Regional Commissions.

For instance, UN Environment is already partnering with UNHCR to produce a study on the nexus between climate change, displacement and conflict due to be finalized in the first half of 2018, the findings of which can feed into an IRP report on conflict and/or migration. A new research initiative by the World Economic Forum (WEF) on urban migration – exploring the types, causes and patterns of migration to cities, the impact on urban infrastructure and services, and innovative solutions – could also present important synergies with an IRP migration-themed report. The United Nations Food and Agriculture Organization's (FAO) 2018 edition of their flagship report "The State of Food and Agriculture" will focus on the issue of rural migration, which can also serve as useful input to an IRP report.

Terms of Reference: N/A - to be developed following approval and further guidance by the Steering Committee on this high impact priority area.

4. MOBILIZING THE BEST SCIENCE-POLICY EXPERTISE

The Panel and SC are the core bodies of the IRP. Their roles are critical in the quest for impact in 2018-2021. The following sections proposed strategies to ensure a strong and diverse composition of the Panel and a dynamic, inclusive, and balanced Steering Committee. For further details on both, please refer to **Annexes 15.3 and 15.4** of this document.

4.1. BUILDING A STRONG AND DIVERSE PANEL

The composition of the Scientific Panel is critical both for informing the process of deciding the new thematic priority areas for the IRP over the next four years, as well as for carrying out the adopted future Work Programme.

The IRP is currently comprised of 35 expert members, representing a range of nationalities, disciplines and specialist areas. The Panel is co-chaired by Janez Potocnik, former European Commissioner for the Environment, and Izabella Teixeira, former Minister of the Environment of Brazil.

The following is the Panel membership strategy for 2018-2021. The main objective of this strategy will be to create a stronger and more inclusive global scientific panel of prominent experts who can undertake high quality research and disseminate the work of the Panel to achieve greater policy impact. For this, three areas of action are suggested: matching the Panel's expertise with 2018-2021 HIPAs; ensuring a balanced and inclusive composition; and better planning and improved process for Panel membership renewal and selection.

1. Matching Panel's expertise with IRP's research priorities

Undertaking research and developing assessment reports and related communication products on the new selected high impact priority areas of the IRP will require careful *matching* of Panel members' expertise with research needs.

In order to ensure that the disciplinary coverage and areas of expertise of the Panel are in alignment with the IRP's proposed new programme of Work, the IRP Secretariat has undertaken an analysis of the Panel's needs in terms of expertise, taking into account the functions of existing Panel members in relation to both of ongoing and proposed new areas of work. This expertise mapping and gap analysis is presented in the table below.

As shown in the table below, several external experts have already been identified that could serve as working group members of the reports under the new high impact priority areas. The IRP will, amongst others, need to engage additional experts working on water and land footprints and on 'safe operating space', modellers working on climate change and on social and resource impacts, and economists and other social scientists with expertise in cost accounting and on the topic of migration.

The conclusions of this analysis seem to be in line with feedback received by IRP members during the 2017 Strategic Planning Exercise, whereby the involvement of experts from the social and political sciences was seen as particular important if the IRP were to address issues relating to the environment-migration nexus, sustainability transition, resource consumption, socioeconomic impacts of resource efficiency and sustainable resource management such as job creation and implications for the finance sector. This, in turn, was perceived as necessary for reaching out to policy-makers in the arguably more influential (than Ministries of Environment) Ministries of Economy and Finance.

Caution was further expressed against appointing too many Panel members that are overly specialized in a particular area, and therefore tend to find it harder to engage on and participate in the research of topics that do not fall under their narrow area of expertise. Instead, it was argued that the Panel would benefit from recruiting more "generalists" who can work on multiple themes and collaborate well within multi-disciplinary research teams. Such experts would also likely be better able to develop convincing storylines, connect dots

and promote cross-fertilization within the Panel's work, which were seen as important criteria for selecting Panel members.

Another important requirement for Panel membership is that they are able and willing to carry out dissemination work for the IRP, explore collaboration opportunities with their respective affiliated institutions or networks, as well as undertake capacity building activities in developing countries linked to their field of work. Therefore, in considering the composition of the Panel, there is a need to include people with multiple abilities and skills such as capably facilitating discussions, presenting to different audiences, creating and engaging in networks, thinking creatively and innovatively, and identifying and driving solutions. The agreed practice of a circa one-year engagement period with candidate Panel members before they are considered for membership is helpful in this regard, as it provides an opportunity to assess the expertise, availability as well as the broader skillset of potential members.

While it was recognized that all Panel members have the necessary skills and expertise, it was nevertheless stated that many do not have the availability to contribute in a very substantive manner to the pro-bono work of the Panel. It was thus recommended that all Panel members should participate in at least one working group developing a report.

HIPA	Reports	Panel members involved	External Experts involved	Additional expertise needed
HIPA 1: Current Trends And Future Prospects For Global Resource Use And Sustainable Resource Management	Metrics and data for sustainable resource use	Heinz Schandl	Stephan Lutter, Jim West	Budgetary issues to be solved (annual update between 30-40k USD)
	Defining Sustainable Levels Of Resource Use	Stefan Bringezu, Anders Wijkman		Working closely with the whole Panel and the scenario modelling team. Could also be developed as a think piece or as a part of the global assessment report. Additional expertise needed on the interface of digital technologies and sustainable natural resource use.
	Developing and Demonstrating Scenario Modelling Of Integrated Natural Resource Use	Michael Obersteiner, Heinz Schandl, Steve Hatfield-Dodds, Paul Ekins, and Ester van der Voet		Working closely with the global assessment report team. Continuous exchange with OECD colleagues on their work. Additional expertise needed in modelling resource scarcity
	Global Assessment On Natural Resource Use And Management	Proposed lead: Bruno Oberle IRP Members (interest confirmed): Heinz Schandl, Stephanie Hellweg, Stefan Bringezu, Michael Obersteiner, and Steve Hatfield-Dodds	Strategic Partners and/or External Experts (interest to be confirmed): GEO-6 team; 10YFP; IPBES; GSDR; ICSU	Working closely with scenario modelling team; Experts in the area of water and land footprints could be targeted; Perspectives from the global south to be actively engaged. Depending on the theme of UNEA-4 (2019), additional expertise may be required.
HIPA 2: Sustainable Resource Management Within The Global Climate Change Agenda	Part I: Resource efficiency and climate change - A request from the Group of 7	IRP Members (interest confirmed): Edgar Hertwich (proposed lead author) Stephanie Hellweg, Tom Graedel, Ester van der Voet, and Saleem Ali IRP candidates (interest confirmed): Helga Weisz, and Reid Lifset.	External Members: Stefan Pauliuk (University of Freiburg, DE), Elsa Olivetti (MIT, USA), Matt Eckelman (Northeastern University, USA), Junming Zhu (Tsinghua University), Niko Heeren (ETH/Yale), Tomer Fishman (Yale); Rakhyun Kim, Utrecht University, The Netherlands, Eric Masanet (Northwestern University, USA), Luca Ciacci (Uni. Bologna), Fulvio Ardente (EC), and Kazuyo Matsubae (Tohoku University, tbc).	Other IPCC modellers and authors to be approached. Additional expertise needed in the field of land use in terms of climate change mitigation.
	Part II: Leveraging resources for a low-carbon, climate-resilient development.	Potentially same WG as Part I		IPCC authors on adaptation and mitigation

HIP3: Socioeconomic Implications of the Transition To More Resource Efficient Economies And Societies	Transition To A Resource Efficient Economy	Concept lead: Mark Swilling, Helga Weisz, and Hans Bruyninckx IRP members with relevant expertise (interest not confirmed): Anuradha Ramaswami, Maarten Hajer, Hans Bruyninckx, Anders Wijkman,	Strategic Partners and/or External Experts (interest to be confirmed): IDS at Sussex; GEO-6 team.	The IRP has a strong base on experts in the area of transitions; however, experts from the numerous events including the annual International Sustainability Transitions conference could be recruited engaged for this emerging and growing field.
	Resource Governance In Light Of Fundamental Transitions In Systems Of Production And Consumption	Concept lead: Hans Bruyninckx IRP members: Maarten Hajer, Tanya Abrahamse and Eeva Primmer, with others to be defined (Anders Wijkman, Salim Ali, and Marina Fischer-Kowalski).	Strategic Partners and/or External Experts (interest to be confirmed): European Environment Agency; 10YFP.	The IRP has a strong base on experts in the area of transitions; however, experts in policy analysis could be engaged (including OECD). Additional expertise needed in resource governance, including communications aspects and the multi-level approach.
	Managing the world's natural resources for the benefit of all	Concept leads: Ashok Khosla, Development Alternatives IRP members: Anuradha Ramaswami, IRP candidates: Eeva Primmer	Recommendations from the Panel (tbc): IIASA - Namasi Araou; Julia Steinberg; Klaus Uberchikt – carbon impact of distributional issues; Santa Fe institute – Sam Bowles; University of Massachusetts - James Boyce. Strategic Partners and/or External Experts (interest to be confirmed): UN Poverty Environment Initiative (PEI); ICSU (and new partner International Social Science Council - ISSC); United Nations regional commissions	Experts in social sciences, economics and cost accounting; Expert modellers linking social and resource impacts. Experts could include Kate Raworth (Donut Economics) and other researchers working on a 'safe operating space' (Oxfam, IUCN).
	Resources and finance	Concept Leads: Michael Obersteiner, and Paul Ekins IRP members: Maarten Hajer	Columbia Centre for Responsible Investment (tbc) Strategic Partners and/or External Experts (interest to be confirmed): Ellen McArthur Foundation (has expressed interest); ICC; WBCSD; SUN; SystemIQ and other private sector platforms to be targetted in IRP engagement strategies	Engaging with private sector platforms to gather data on the relevant sectors targeted; and insight into barriers to resource efficiency investment from the private sector perspective.

HIPA 4: Sustainable Resource Management Links To Conflict And Migration	Sustainable resource management links to Conflict and Migration	<p>IRP Members (interest confirmed): Saleem Ali, Elias Ayuk, Vijay Kumar, and Anthony Chiu, Stefan Bringezu</p> <p>(interest to be confirmed): Maarten Majer</p>	<p>Strategic Partners and/or Exrternal Experts (interest confirmed): Oli Brown (UN Environment), Iyenemi Ibimina Kakulu (Rivers State University of Science and Technology), Irene Schöfberger (ICSU) (interest to be confirmed): Hania Zlotnik (UN-DESA), Saskia Sassen (Columbia University).</p>	<p>Need to engage more social scientists (including political economists) with particular expertise in the area of migration. Could partner with another Division in UN Environment (e.g. Policy Division - interested in migration, Ecosystems Division - interested in land restoration), an international organisation (e.g. IOM, UNHCR, UNCCD), or an academic/research institution to develop this work. Important synergies could found with the IRP work stream on Land Restoration. The IRP should also bring in expertise relating to conflict resolution and peace building; and environmental security.</p>
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2. Inclusive membership

In addition to aligning the expertise of the Panel with the next programme of work, there is a critical need to ensure “inclusive” membership of the Panel. This is a stated guiding principle of the IRP, which “aims at striking and maintaining a balanced and diverse composition of the Panel, Steering Committee and Working Groups in terms of expertise, gender, and regional representation.

As alluded to previously, the Scientific Panel should be multi-disciplinary, with more efforts devoted to expanding the disciplinary coverage of IRP members to ensure a better balance in the Panel between biophysical, economic and social domains, and capturing synergies.

With women only comprising 20 per cent of the Scientific Panel, there is a pressing need to devote significant efforts to recruit more female Panel members; for instance, by reaching out to relevant women scientist networks.

In term of geographical representation, the Panel should strive to become more geographically diverse by recruiting more members from under-represented regions such as Latin America, Western Asia and Eastern Europe. It was argued that broader geographical coverage within the Panel – beyond having merit in its own right – could also help it to reach out to and inform senior policy-makers from all world regions.

Launching an open call for expression of interest for joining the Panel will be an important means of identifying new talent and helping create a more inclusive and diverse Panel.

3. Better planning and improved process for Panel membership renewal and selection

Finally, in assessing the capacity of the Panel to recruit new members, the current composition of the Panel offers valuable insights. It shows that over the next two years up to November 2019, of the 35 existing Panel members:

- 16 will reach the end of their first three-year terms,
- 7 the end of their second three-year terms,
- 7 the end of their fourth (as exceptionally renewed) three-year terms.

The fact that seven Panel members will have to retire from their functions in the Panel having served for the maximum number of terms permitted and taking into account the maximum target number of 40 Panel members, this means that there is capacity to recruit at least 12 new Panel members by the end of 2019. This number will be higher if the membership of any of the other 23 Panel members who are eligible for membership renewal is not extended.

With respect to the process of renewing membership terms and appointing new members, the IRP Policies and Procedures stipulate that a Group of Scientific Reviewers – composed of three current Panel members and the Panel Co-Chairs – meets to reviews the candidatures and recommends potential members to the Secretariat.

The Group of Scientific Reviewers that met at the 20th IRP Meeting in June 2017 and at the 21st IRP Meeting in November 2017, made some recommendations for improving the membership review process. These include inviting Panel members to express interest in joining a Panel membership committee in a structured and transparent manner; appointing a greater number of reviewers (for example, six) than that stipulated in the IRP Policies and Procedures; and enabling this committee to review Panel membership candidacies throughout the year, and sufficiently in advance of making a decision on the appointment of new and renewal of existing members.

In response to these recommendations, a document will be prepared detailing the procedure on Panel member recruitment and renewal to be implemented within the framework laid out by the IRP Rules and Procedures. This procedural paper should address concerns raised regarding transparency of the process, and also support a development towards better regional and gender balance in the Panel composition.

4.2. STRENGTHENING THE IRP STEERING COMMITTEE

The Steering Committee (SC) of the International Resource Panel was established in 2007 as the governing body of the IRP providing strategic policy guidance, enhancing policy relevance and impact of the IRP's work, and promoting the IRP among their constituencies and networks at country, regional and international level.

Since 2007, the number of SC members and their involvement has evolved. As of 2017, the Steering Committee is composed by 25³⁰ governments of Member States of the United Nations, the European Commission (EC) and UN Environment; with the last two members acting as the SC Co-Chairs. The following table shows membership per region, as of 2017, (and by Economic and Regional Platform):

³⁰ Long-term inactive SC members such as Kazakhstan and Russia have received letters for re-engagement. Follow up through the UN Environment Central Asia and Russia Offices is being carried out. Letter to Malaysia to be sent. Updates on Steering Committee membership will be provided regularly at the IRP biannual meetings

IRP SC MEMBERS								
REGION	ECONOMIC PLATFORMS			REGIONAL PLATFORMS				EMERGING NATIONAL ECONOMIES
	G7	G20	OECD	EU	ECLAC	ASEAN	AFRICAN UNION	BRICS
EUROPE (9 out of 27)			Norway, Switzerland Belgium, Finland, Netherlands, Sweden		Netherlands, Norway			
	France, Germany, Italy							
ASIA & PACIFIC (6 out of 27)		China* India, Indonesia			Japan	Indonesia, Philippines, Viet Nam		China, India
	Japan*							
LATIN AMERICA & CARIBBE (5 out of 27)		Argentina	Chile		Argentina, Chile, Colombia, Mexico, Peru			
	Mexico							
AFRICA (4 out of 27)		South Africa					Kenya, Tanzania, Tunisia	
							South Africa	
NORTH AMERICA (1 out of 27)	United States				United States			

* Japan and China (together with the Republic of Korea) are also included in ASEAN plus Three

Note: In addition to the Member States represented in the table above, UN Environment and the European Commission are members of the IRP Steering Committee

While the IRP SC membership expanded in the first 10 years, with active participation in IRP meetings by some members, there are still some areas for improvement which need to be addressed by the Steering Committee Strategy of 2018-2021. These include:

- 1) Lack of active engagement of some SC members. The level of engagement of SC members varies from those who are very actively providing feedback, organizing events, translating documents, participating in IRP meetings, to those who limit their contributions to meeting participation. The latter may be due to cultural differences, lack of appropriate representation, meeting set-up, change of focal point and priority of the IRP within the government's agenda.
- 2) Lack of information on outreach and dissemination activities by SC members. In many cases it is unknown by the IRP Secretariat how members of the SC are using and disseminating IRP materials within their ministries and beyond. More communication is also needed on the political priorities and platforms of the SC member and its region.
- 3) Regionally unbalanced SC membership. Currently the distribution of SC members at regional and sub-regional levels is inadequate (see table of membership above).
- 4) Limited financial contributions Articles 9 and 10 of the IRP Policies and Procedures require annual financial contributions from OECD country members and expects non-OECD members to strive to provide these. Both groups may provide in-kind support to the IRP. However, not all OECD members have complied with this requirement and contributions (financial and in-kind)

from non-OECD countries have been somewhat limited.³¹ Considering levels of ambition for the this Work Programme there is a need to mobilize larger and more stable funding for the IRP (for further details, please refer to Section 6).

Considering the above, the following are the proposed objective and targets of SC membership engagement in 2018-2021:

Objectives	<p>Strengthen the IRP Steering Committee by</p> <ul style="list-style-type: none"> » Re-engaging existing members, especially those who are inactive » Strategically inviting new members
Targets	<ol style="list-style-type: none"> 1 Increase the interest and engagement/ active involvement of the IRP Steering Committee members 2 Increase the visibility and outreach of the IRP through the support of the SC 3 Strategically expand the SC membership base to at least 35 members: adding at least 3 African countries, 2 LAC countries, 1 Asian & Pacific country, 2 OECD/developed countries (preferably from any of the priority Economic or Regional Platforms included in section 5.1) to: <ul style="list-style-type: none"> • Achieve a better regional representation, ensuring diversity of perspectives and global nature of the IRP; • Increase members of Economic and Regional Platforms who are influencing the Environmental Agenda and who are priority IRP core audiences for 2018-2021; • Build a larger donor base within the IRP SC keeping in mind the need to strive for an inclusive and balanced SC membership. 4 Increase overall financial and in-kind contribution from current SC members, increase compliance rates of financial obligations from OECD members and expand the donor base (as reflected in Section 6)

A suggested **action plan** for this strategy is included below.

³¹ Please refer to the Resource Mobilization Strategy for details of financial and in-kind contributions in the period of 2015-2017.

Action plan

a Ensure active participation in the IRP of all SC members (including active attendance to IRP meetings and the provision of valuable inputs to existing and emerging work streams)

- Ensure senior representation at biannual IRP meetings, who can provide views on behalf of the country.
- Ensure continuity of representation at IRP meetings, facilitate smooth transition in the event the appointed focal point leaves the work place (e.g. change of position/ place of work or retirement) or there is a change of government.
- Strengthen the role of the SC in ensuring the policy relevance of the Terms of Reference, drafts and summary for policy makers.
- Encourage consultations with relevant units within the SC's Ministry and other relevant Ministries/Agencies to collect input on IRP drafts.
- Encourage the submission written comments from SC members to the Secretariat

b Increase the visibility, outreach and impact of the panel's findings through the support of the SC

- Ensure that the outcomes and application of IRP reports are understood at the regional and national level.
- Secretariat to develop dissemination material (e.g. ppt) to be used by SC members for dissemination.
- Members to carry out outreach at national level to reach out to:
 - ✓ Relevant colleagues within their Ministry/Agency
 - ✓ Focal points of other initiatives (e.g. 10YFP, PAGE, Switch Asia, Switch Africa, Switch Med) *
 - ✓ Other Ministries (e.g. Foreign Affairs, International Development, Trade)
 - ✓ Relevant networks
- Members to carry out outreach at regional level ** by:
 - ✓ Understanding interest of the different regions and organizing targeted events back to back with regional relevant events to increase visibility and to interact with potential SC members.
 - ✓ Working with SC members from the same region/regional platforms to unify voices and move forward resource efficiency/any other selected topics at Regional Agendas (e.g. Regional ministerial meetings) or at Regional platforms (ASEAN, African Union, etc.)
- Coordinate with SC members to get their country's support to relevant UNEA resolutions at the different related events.
- Expand the SC membership to countries from influential Economic platforms (e.g. G7, G20) and Regional Platforms (e.g. ECLAC, ASEAN, Africa Union)
- Organize a Ministerial segment of the SC every three years in conjunction with UNEA or other relevant event.

c Strategically expand the Steering Committee membership base keeping in mind the need to strive for an inclusive and balanced SC membership

- Prepare an Information Package on the IRP including information related to the Steering Committee roles and responsibilities
- Work closer with all Regional Offices and relevant UN Environment Initiatives (10 YFP, PAGE, Switch Asia, Switch Africa, Switch Med) to identify a senior official from selected Governments who could be the entry point for introducing the Panel and further exploring the potential interest in joining the Panel.
- Work closer with Panel members from specific countries and from the region who might have contacts in the government
- Strategically expand the Steering Committee membership to achieve a better regional representation; increase the representation at bodies/platforms influencing the Environmental Agenda and are IRP targeted audiences; build a larger donor base within the IRP Steering Committee.
 - ✓ The selection of new potential members, to achieve better regional representation should follow a set of criteria including but not limited to: a) expressed interest in the IRP, b) relevance of IRP work to their country, c) political stability and commitment, d) existence of research institutions. In addition, priority should be given, wherever possible, to countries from unrepresented sub-regions.
 - ✓ To limit the representation of "developed" countries within the IRP but still meet the requirements mentioned above; strategic countries represented at various influential platforms could be engaged.

Action plan

d Increase contributions (financial and in-kind) from current SC members and reactivate financial engagement of members. For this action, please refer to Section 6

* The IRP Secretariat is to make available and establish the contact among national focal points of relevant UN Environment initiatives

** During the joint session of the 22nd IRP Meeting break-out groups by region might be organized to identify needs/interests of the regions and potential approaches by the region

5. ENGAGING MORE AND BETTER WITH IRP AUDIENCES

The IRP's interdisciplinary nature, international expertise, and high-quality products on sustainable resource management have been widely acknowledged by environmental policy audiences and organizations working with the IRP. However, the IRP brand recognition is still low among certain policy networks, non-governmental organizations, and private sector actors. The following is a proposed strategy to engage with a selected group of IRP core audiences in a more systematic and strategic manner. It includes a separate strategy for core audiences from the private sector as requested by the IRP SC. More details on the process followed to develop this strategy can be found in **Annexes 5 and 6** of this document.

5.1. IRP ENGAGEMENT STRATEGY: CORE AUDIENCES

The Secretariat identified a long list of IRP core audiences taking into consideration feedback received from IRP members, the mandate and expected impact of the IRP, as well as the relationships built over the last 10 years (see Annex 5). A shorter list was then developed considering three main criteria: decision-making power (e.g. adopt resolutions, launch initiatives, develop normative instruments, etc.); global reach with strategic regional interactions; and existing engagement with the IRP.

The following are the priority core audiences of the IRP for 2018-2021. The stakeholders in dark grey are considered a top priority in 2018-2021, the rest are considered of a lower priority and, therefore, to be engaged if low-cost opportunities emerge or additional resources are mobilized.

<div> <div></div> High priority <div></div> Lower priority * Current Strategic Partners ** Proposed new Strategic Partners </div>		
Audience category	Stakeholder	Current level of engagement with IRP
Intergovernmental platforms	HLPF**	HIGH
	UNEA**	HIGH
	10YFP**	HIGH
	IPCC**	LOW
	IPBES**	LOW
	UNCCD	HIGH
	UNCBD	LOW
Economic Platforms	G7	HIGH
	G20	LOW
	OECD*	HIGH
Regional Policy Platforms	European Union	HIGH
	ASEAN+3	LOW
	UN Regional Commissions (ESCAP, ECLAC, ECE, ECA, ESCWA)**	HIGH
	African Union	LOW
	Arab League	NONE
Academic Networks and research Institutions	Global Footprint Network	NONE
	Future Earth	HIGH
	ISIE	LOW
	IUCN*	HIGH
	ICSU*	HIGH
Development banks	World Bank	NONE
	African Development Bank	NONE
	Asian Development Bank	NONE
	Inter-American Development Bank	NONE
	European Investment Bank	NONE
Private Sector platforms (including strategic partners: ICC*, SUN*, WBCSD*) <i>Addressed in section 5.2</i>		

**Currently an IRP Strategic Partner.*

***These stakeholders will be approached for a strategic partnership. Strategic partners are targeted to bring diverse perspectives to the IRP work, including those of civil society, academia, and the social sciences. The organizations identified for strategic partnership in the table above have been selected for their potential impact and interlinkages with intergovernmental platforms. This list is indicative, and will change in accordance with IRP research needs and evolving international priorities. Some of the above listed Strategic Partnerships are further elaborated in the below strategy. Ultimately, the IRP will strive to formalize at least five new strategic partners, as well as increase engagement and interaction with existing partners, in the coming work cycle.*

The objectives of the engagement of these core audiences (excluding private sector platforms, which have a separate strategy included in section 5.2.) are:

Objectives	<ul style="list-style-type: none"> » Influence behavior of critical core audience stakeholders towards a more sustainable use of natural resources » Contribute to the achievement of the expected impact of the 2018-2021 IRP Work Programme: <ul style="list-style-type: none"> • Policy-makers and other stakeholders gain a better scientific understanding of the environmental, social and economic issues, benefits and pathways (decoupling) to sustainable resource use and management that can inform decision making and policy development • The work of the IRP is taken up by policy-makers in making decisions related to resource use and management along the full life-cycle (including re-use, recycling and final disposal). The IRP's work is also taken up by other stakeholders that can influence the policy discourse (such as research institutions, civil society organizations and business associations) • The IRP's scientific findings are thus used to inform policies that promote the sustainable management of resources at global, regional and national levels
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The following are **the proposed targets** for the 2018-2021 core audience engagement strategy:

Targets	<ul style="list-style-type: none"> 1 Active engagement of at least 5 core audience stakeholders 2 Each of these stakeholders to: <ul style="list-style-type: none"> • Publicly recognize the IRP as the leading science-policy interface for sustainable resource management. • Actively use the IRP narrative and key messages of IRP publications on sustainable resource management within private or public fora. • Actively participate in IRP activities such as development of assessments, outreach and dissemination events, and/or capacity development. • Demonstrate willingness to engage in taking up IRP information by either integrating it into policy making or decision making process. 3 Formalize relationships with at least five core audiences as IRP 'Strategic Partners' (IRP Strategic Partners are defined in Section III)
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The core audience engagement strategy will **focus on the following IRP publications:**

1. Publications from the previous cycle based on demand.
2. Upcoming publications from the 2018-2021 IRP Work Programme high-impact priority areas (to be decided by the Steering Committee):
 - a. Current trends and future prospects for global resource use and sustainable resource management
 - b. Sustainable Resource Management within the global climate change agenda
 - c. Socioeconomic implications of the transition to more resource efficient economies and societies.
 - d. Sustainable resource management links to conflict, security and migration

The suggested action plan to reach out to these priority core audiences of the IRP (excluding private sector platforms, included in section 5.2.) is the following:

1. Intergovernmental Platforms				
Core audience	Policy impact	Engagement with the IRP	Relevant contacts within the IRP	Proposed action
HLPF	<ul style="list-style-type: none"> Main United Nations platform on sustainable development and it has a central role in the follow-up and review of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) at the global level. Countries report progress on the above-mentioned agenda through this UN mandated body. 	<ul style="list-style-type: none"> Engagement in IRP 2017 strategic exercise through Eeva Furman, Director of the Environmental Policy Centre at the Finnish Environment Institute SYKE and member of drafting group of the 2019 Global Sustainable Development Report commissioned by the High-Level Political Panel. She actively contributed to the discussions in Helsinki and called for direct input from the IRP into the 2019 GSDR. Organization of joint event with the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety entitled "How to leave no one behind: Sustainable Resource Management" during the 2016 HLPF Meeting (19 July 2016). 	Dr. Eeva Furman is in direct contact with Finland and the IRP Secretariat.	<ul style="list-style-type: none"> Provide relevant IRP input to the 2019 GSDR team (2018) Secure slot on high-level session or organize side event with the 10YFP to present IRP inaugural report at the 2018 HLPF (July 2018). During this meeting entitled "Transformation towards sustainable and resilient societies", goals 6 (water), 7 (energy), 11 (cities), 12 (SCP), 15 (land) will be reviewed. The IRP should somehow inform this review. Secure slot on high-level session or organize side event to launch/present results from work in HIPA 1 (2019 Global assessment on Natural Resources) and/or 2 (climate change)) at the 2019 HLPF (July 2019). During this meeting entitled "Empowering people and ensuring inclusiveness and equality", goals 8 (sustainable economic growth), 10 (equality), 13 (climate change), will be reviewed. The IRP should somehow inform this review. Participate in launch of 2019 GSDR team (2019).

Core audience	Policy impact	Engagement with the IRP	Relevant contacts within the IRP	Proposed action
UNEA	<ul style="list-style-type: none"> • Highest-level decision-making body on the environment. • It meets biennially to set priorities for global environmental policies and develop international environmental law. • Through its resolutions and calls to action, the Assembly provides leadership and catalyses intergovernmental action on the environment. • It has the universal membership of all 193 UN Member States and the full involvement of UN organizations, specialized agencies, inter-governmental organizations, civil society and the private sector. In bringing together these actors, it provides a platform for leadership on global environmental policy. 	<ul style="list-style-type: none"> • Resolution 2/8 (Sustainable Consumption and Production) of the Second Session of the United Nations Environment Assembly recognized the work of the IRP and invited it to “make available reports relevant to this resolution, including on the state, trends, and outlook of sustainable consumption and production, to a future meeting of the United Nations Environment Assembly, but not later than 2019”. • In response to this call, the IRP will present an inaugural regular report entitled “Assessing Global Resource Use: A Systems Approach to Resource Efficiency and Pollution Reduction” at the forthcoming UNEA-3. This will be submitted as an information document for the meeting, and presented at dedicated side events. 	<p>The IRP Secretariat is in direct contact with the UN Environment Assembly Bureau and the Committee of Permanent Representatives.</p>	<ul style="list-style-type: none"> • Provide information to the meetings of the Committee of Permanent Representatives to enable recognition of IRP work (2018-2021). • Interact with the UNEA Bureau on a more regular basis (2018-2021). • Secure high-level slots and opportunities to present IRP reports at UNEA-4 and 5, in particular for the launch of the first Global Assessment on Natural Resources (2019-2021). • Steering Committee to propose resolutions informed by the work of the IRP (2018-2021).
10YFP	<ul style="list-style-type: none"> • An SDG 12 (SCP) implementation mechanism. A global framework of action to enhance international cooperation on the shift towards sustainable consumption and production in both developed and developing countries. 	<ul style="list-style-type: none"> • The IRP reports have informed several policy documents of the 10YFP programmes such as “A Toolkit for 10YFP National Focal Points” (2017). • The IRP report on “Food Systems and Natural Resources” informed the development of the 10YFP programme on Food Systems. 	<p>The IRP Secretariat coordinates joint action with the 10YFP Secretariat as well as the programmatic units involved in the implementation of 10YFP programmes.</p>	<ul style="list-style-type: none"> • Formalize a strategic partnership with the 10YFP Secretariat to position the IRP as the scientific reference for the 10YFP and continue active cooperation by: informing 10YFP policy documents, programme development and monitoring, capacity development, and

	<ul style="list-style-type: none"> • A multi-stakeholder network that develops products and solutions to support countries in the shift to SCP and supports replication and scaling up of SCP policies and initiatives. • Supporting regional and national policies and initiatives. • It fosters knowledge and experience sharing, and facilitates access to technical and financial resources for developing countries. • The 10YF network is multi-stakeholder and includes: Government, Business Sector, Civil Society, Academia and International Organisations. These organisations may well complement the IRP traditional audiences. 	<p>Members of this programme also participated in the report development process of the IRP report.</p> <ul style="list-style-type: none"> • Joint capacity development has been carried out including the Seventh Latin America and the Caribbean Regional Meeting on Sustainable Consumption and Production (24-25 June 2013); a Massive Open Online Course on Sustainable Food Systems in Asia Pacific (August 2016); webinar on Resource Efficiency and Decoupling for 10YFP focal points in Latin America and the Caribbean (3 August 2016). • Joint dissemination events such as “Circular Economy and Resource Efficiency: From Science to Policy Action” (5 June 2017). • Cooperation is currently taking place to develop targets and indicators for SDG 12 (Sustainable Consumption and Production) and facilitate reporting to the HLPF. • The 10YFP is currently developing a framework to monitor progress of the Programmes. The IRP has been actively involved in this process and its MFA database has informed the framework. 		<p>organizing joint dissemination events (online and otherwise). (2018-2021).</p> <ul style="list-style-type: none"> • Inform strategic planning process for the 10YFP 5-strategy (2018-2022) (2018) • Develop joint key messages on benefits of resource efficiency and SCP, which engages the multi-stakeholder network of the 10YFP and beyond. (2018) • Develop joint communication campaign on SCP including a joint event for the 2018 HLPF focusing on SDG 12 (2018). • Inform policy toolkit on Life Cycle Analysis in SCP prepared by the 10YFP and the Life Cycle Initiative (2018). • Summarize findings from “Global Assessment on Natural Resource Use and Management” report to inform future development of 10YFP programmes (2018-2019). • Coordinate when reporting to HLPF of SDGs 12 and 8 (2018-2021). • Exchange information collected by 10YFP on SCP policies, to inform IRP work, in particular for HIPAs 1 and 2. • Reach civil society and private sector audiences through the 10YFP multi-stakeholder network.
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Core audience	Policy impact	Engagement with the IRP	Relevant contacts within the IRP	Proposed action
IPCC	<ul style="list-style-type: none"> • Main intergovernmental body assessing the science related to climate change. • Provides policymakers with regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation. • Provides a scientific basis for governments at all levels to develop climate related policies • Provides input for negotiations at the UN Climate Conference (UNFCCC). 	<ul style="list-style-type: none"> • While no formal cooperation exists, many Panel members are also IPCC authors and ensure linkages in relevant IRP reports (e.g. GHG Technologies). • IRP Secretariat met with the IPCC Secretariat in 2015 to exchange information and experiences on structure, operational policies, funding, and the report development process. The new IRP Policies and Procedures approved in 2016 were informed by this exchange. 	<p>Former contact point with IRP Secretariat was Gaetano Leone. Edgar Hertwick and Sangwon Suh are also IPCC authors.</p>	<ul style="list-style-type: none"> • Formalize a strategic partnership with IPCC Secretariat to ensure their participation in the development and dissemination of HIPA 2 (Sustainable Resource Management Within The Global Climate Change Agenda) (2018). • Engage IPCC authors in IRP Working Groups of HIPA 2 (2018-2019). • Develop joint documents and/or communications products with IPCC on the linkages between resource efficiency and climate change (2018-2021). • Organize joint launch events for HIPA 2 (2019-2021).
IPBES	<ul style="list-style-type: none"> • Main intergovernmental body assessing the state of biodiversity and of the ecosystem services. • Provides policymakers with objective scientific assessments about the state of knowledge regarding the planet's biodiversity, ecosystems and the benefits they provide to people, as well as the tools and methods to protect and sustainably use these vital natural assets. 	<p>While no formal cooperation exists, many Panel members are also IPBES authors and ensure linkages in relevant IRP reports (e.g. Land II and Land Restoration).</p>	<p>Jeffrey Herrick and Michael Obersteiner are actively contributing to the work of the IPBES.</p>	<ul style="list-style-type: none"> • Formalize a strategic partnership with the IPBES Secretariat to ensure cooperation for HIPA 1, in particular for the IRP Global Report on Natural Resources (2018). • Engage IPBES authors in IRP Working Groups of HIPA 1 (2018-2019). • Develop joint documents and/or communications products with IPBES on the linkages between resource efficiency and climate change (2019-2021). • Organize joint launch events for HIPA 1(2020-2021).

2. Economic Platforms

Core audience	Policy impact	Engagement with the IRP	Relevant contacts within the IRP	Proposed action
G7	<ul style="list-style-type: none"> • Forum for dialogue at the highest level attended by the leaders of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States. • issues communications, agreements and pledges between Heads of State. • Outcomes are non-binding; accountability through prominence of agreements in political sphere and civil society. 	<ul style="list-style-type: none"> • The G7 Leaders declaration from 7-8 June 2015 asked the IRP to “prepare a synthesis report highlighting the most promising potentials and solutions for resource efficiency”. The IRP report “Resource Efficiency: Potential and Economic Implications” was developed in response to this request. Two presentations at G7 summits took place in 2016 and 2017. • The G7 Environment Ministers declaration from 11-12 June 2017 invited the IRP to “conduct a study on the above (<i>potential GHG reductions of resource efficiency policies</i>), including providing emission scenarios connected to the implementation of RE/CE/3R/SMM policies and comparing these with the implementation of conventional <i>policies</i>. <i>An assessment of the deployment of low carbon technologies relevant for the implementation of RE/CE/3R/SMM should also be provided.</i>” As a response to this invitation, terms of reference will be submitted to members for an assessment on the linkages between resource efficiency and climate change policies, included under High-Impact Priority Area 2 of the 2018-2021 IRP Work Programme. 	Coordination with the current G7 Presidency is being done by the IRP Secretariat through the Italian Steering Committee focal point Aldo Ravazzi.	<ul style="list-style-type: none"> • Respond to invitation from G7, by developing the IRP report on resource efficiency and climate change. G7 Presidency to be actively involved throughout the report development process to ensure coordination and impact (2018-2019). • Steering Committee members who are also G7 members to support dissemination of IRP report within the platform, in particular with upcoming presidencies (Canada in 2018 and France in 2019). • Organize dissemination events at G7 summits (2018-2021). • Inform/organize joint events with the G7 Alliance on Resource Efficiency (2018-2021)

Core audience	Policy impact	Engagement with the IRP	Relevant contacts within the IRP	Proposed action
G20	<ul style="list-style-type: none"> • High-level international forum for the governments and central bank governors of 20 countries representing more than four-fifths of gross world product and three-quarters of global trade, and are home to almost two-thirds of the world's population. • Main high-level forum for international cooperation on financial and economic issues. Prominent membership gives it a strong input on global policy. • Multilateral dialogue, knowledge sharing and agreements on economic, social and environmental issues. 	While no formal cooperation exists, conversation about the relevance of resource efficiency has been conveyed by Steering Committee focal points of Germany (G20 presidency in 2017), Japan, and Argentina (G20 presidency in 2018).	Communication with the current G20 Presidency is being done by the IRP Secretariat through the German Steering Committee focal points Birgit Schwenk and Anne Mieke.	<ul style="list-style-type: none"> • Tailor IRP material to information needs from the group (e.g. resource efficiency in a broad sense: sustainable management of water, implementation of SDGs related to natural resources, deepening the understanding of global resource flows, modelling and scenario development, exchange of good practices in policy and business for resource efficiency, etc.). Priority Sustainable Development Goals for the HLPF in 2018 and 2019 might also serve as a thematic focus. • Steering Committee members who are also G20 members to support dissemination of IRP material within the platform, in particular with upcoming presidencies (Argentina in 2018 and Japan in 2019). • Organize dissemination events at G20 summits (2018-2021). • Inform/organize joint events with the G20 Resource Efficiency Dialogue (2018-2021).
OECD IRP Strategic Partner	<ul style="list-style-type: none"> • Intergovernmental economic organisation with 35 member countries considered as high-income economies. 	<ul style="list-style-type: none"> • Former SC member, now a Strategic Partner. 	Communication done by the IRP Secretariat through the Steering Committee focal point Peter Borkey.	<ul style="list-style-type: none"> • Engage OECD experts in IRP Working Groups for HIPAS 1 (trends of natural resource use) 2 (climate change) and 3

	<ul style="list-style-type: none"> • Compares policy experiences, identifies good practices and coordinates domestic and international policies. • Provides policy recommendations, data and tools to inform policy makers and monitor performance. 	<ul style="list-style-type: none"> • Actively engaged in the report development process through participation in working groups, annual meetings and dissemination events. • Recently launched “Policy Guidance on Resource Efficiency” in coordination with the IRP report “Resource Efficiency: Potential and Economic Implications” as requested by the G7. 		<p>(socio-economic implications) (2018-2019).</p> <ul style="list-style-type: none"> • Create expertise linkages in OECD initiative on Circular Economy (2018). • Develop joint science-policy documents on socio-economic implications of resource efficiency (2018-2021). • Organize joint dissemination events (2018-2021).
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3. Regional Policy Platforms

Core audience	Policy impact	Engagement with the IRP	Relevant contacts within the IRP	Proposed engagement
European Union	Political and economic union of 28 member states which enacts legislation, promotes regional policies, signs treaties and agreements, monitors implementation, and has judicial powers.	The European Commission (EU institution responsible for proposing legislation, implementing decisions, upholding EU treaties and managing the day-to-day business) is one of the most active SC members and donors of the IRP. It is also Co-Chair of the IRP Steering Committee.	The IRP Secretariat coordinates with SC focal points Astrid Schomaker (Co-Chair) and Luca Marmo.	<ul style="list-style-type: none"> • Link IRP work to EC initiatives on the Circular Economy, including on monitoring and on plastics. • Consider the participation of EC experts (notably from the JRC and possibly DG RTD and DG CLIMA) in relevant IRP Working Groups, in particular 1 (trends of natural resource use) and 2 (climate change). • Explore possibilities for joint dissemination and awareness events on HIPAs and related work (e.g. proposed reports), at e.g. UNEA, HLPF, G7/G20. • Propose to the EU Presidency to present IRP relevant work to the Council Working Party on International Environment Issues (WPIEI), the Working Party on Environment (WPE) or any other Council working party of relevance. A similar course of action could be taken with the EP and in particular its Environment CTTEE. • Mobilize EC support for greater involvement of the IRP in G7 and G20 and for the organisation of events related to G7/G20 processes, including the G7 Alliance on Resource Efficiency and the G20 Resource Efficiency Dialogue.

ASEAN+3	<ul style="list-style-type: none"> Regional intergovernmental organisation of 10 Southeast Asian states plus China, Japan and Korea, which promotes intergovernmental cooperation and facilitates economic, political, military, educational and cultural integration amongst its members and Asian states. It issues legally-binding treaties, agreements and non-binding declarations. 	<ul style="list-style-type: none"> The report “Regional Assessment Report on Decoupling in Asian Cities: An Infrastructure Transitions Perspective” was developed with input from the work of the IRP on Cities Decoupling (through Panel member Anu Ramaswami) with the support of the China-ASEAN Environmental Cooperation Centre (CAEC). ASEAN representatives have attended capacity development events organized by the IRP in coordination with the UN Environment Regional Office for Asia Pacific. These include: the sustainable Development Goals, Natural Resource Accounts and Policy Indicators (14-15 December 2016); Massive Open Online Course on Sustainable Food Systems in Asia Pacific (August 2016). The IRP report “Food Systems and Natural Resources” was launched in China with the cooperation of the China ASEAN Environment Center (24 October 2016). An IRP capacity development was organized at the 6th ASEAN+3 Leadership Programme on SCP (15-18 October 2013). 	The IRP Secretariat coordinates with ASEAN through the UN Environment Regional Office for Asia Pacific, Panel member Anthony Shun, or SC focal points for China.	<ul style="list-style-type: none"> Build relationship with ASEAN Secretariat through collaboration in regional science-policy events, including at the biannual ASEAN Summits in 2018-2021. Involve ASEAN in consultation process for new expertise requirements (2018-2021) Develop joint documents and/or communications products regionally tailored with the cooperation of UN Environment Regional Office for Asia Pacific for HIPAs 1, 2, 3, and 4 (2018- 2021). Organize joint launch and/or dissemination and capacity development events, in particular for HIPA 1 (2020-2021). Reach out to other regional platforms through the UN Environment Regional Office for Asia Pacific: South Asian Association for Regional Cooperation (SAARC) and South Asia Co-operative Environment Programme (SACEP). Concretely, the IRP to inform the South Asia Forum on SCP launched by the latter.
ECLAC	<ul style="list-style-type: none"> One of the five regional economic commissions of the UN. Contributes to the economic development of Latin America, coordinating actions 	<ul style="list-style-type: none"> Engagement through the participation of former Panel Co-Chair Alicia Bárcena, ECLAC Executive Secretary. 	The IRP Secretariat coordinates with ECLAC through focal point Jeannette Sanchez, Chief of the Natural Resources and Infrastructure Division; and the	<ul style="list-style-type: none"> Formalize a strategic partnership through which the IRP agrees to provide information to ECLAC on a regular basis (e.g. to inform ECLAC’s annual high-level meetings






	<p>and reinforcing economic ties among countries and with other nations of the world.</p> <ul style="list-style-type: none"> • Multilateral dialogue, knowledge sharing and agreements on economic, social and environmental issues. 	<ul style="list-style-type: none"> • Hosted 14th IRP meeting in Santiago, Chile. • Active participation in 2017 Strategic Planning Exercise. 	UN Environment Regional Office for Latin America and the Caribbean.	<p>in May); and ECLAC provides access to regional networks for exchange of perspectives and information (2018).</p> <ul style="list-style-type: none"> • Involve ECLAC in consultation process for new expertise requirements (2018-2021) • Engage ECLAC experts in IRP Working Groups of HIPAs 1 (trends) 3 (socio-economic implications) and 4 (migration) (2018-2019). • Develop joint documents and/or communications products for HIPAs 1 and/or 4 (2019-2021). • Organize joint launch and/or dissemination and capacity development events, in particular for HIPAs 1 and 4 (2020-2021).
ESCAP ³²	<ul style="list-style-type: none"> • One of the five regional economic commissions of the UN. Contributes to the economic development of Asia Pacific, coordinating actions and reinforcing economic ties among countries and with other nations of the world. • Multilateral dialogue, knowledge sharing and 	<ul style="list-style-type: none"> • Co-development of background paper for the 2017 Environment Summit, including strong reference to forthcoming IRP report to UNEA-3 	The IRP coordinates with ESCAP through the Environment and Development Division of the commission.	<ul style="list-style-type: none"> • Formalize a strategic partnership through which the IRP agrees to provide information to ESCAP on a regular basis (e.g. to inform ESCAP's annual high-level meetings that feed into the global HLPF); and ESCAP provides access to regional networks for exchange of perspectives and information (2018).

³² The Regional Commissions of ECLAC and ESCAP are given as examples of engagement that could be pursued with other United Nations Regional Commissions.




	agreements on economic, social and environmental issues.			<ul style="list-style-type: none"> • Involve ESCAP in consultation process for new expertise requirements (2018-2021) • Engage ESCAP experts in relevant IRP Working Groups of interest. • Develop joint documents and/or communications products. • Organize joint launch and/or dissemination and capacity development events.
African Union (plus African Ministers of Environment)	<ul style="list-style-type: none"> • Regional intergovernmental organization issuing agreements and declarations by 55 African member states. • Determination of common policies of the AU, including the adoption of treaties and protocols; with power to impose sanctions in case of non-compliance. 	Limited collaboration through the participation of Panel members in African Union meetings and working groups.	Collaboration coordinated through UN Regional Office for Africa, former Panel member Kevin Urama, and Panel member Mark Swilling.	<ul style="list-style-type: none"> • Present IRP findings and tailor key messages to Africa natural resources challenges and opportunities through African Union events (to be identified). • Collaborate with the “African Commodity Strategy” flagship initiative (modalities to be defined).

4. Academic Networks and Research Institutions				
Core audience	Policy impact	Engagement with the IRP	Relevant contacts within the IRP	Proposed action
International Science Council (ICSU) IRP Strategic Partner	<ul style="list-style-type: none"> • NGO with a global membership of national scientific bodies (122 Members, representing 142 countries) and International Scientific Unions (31 Members). • Prepares reports, organizes events on science-policy platforms. • Represents members at intergovernmental processes (e.g. HLPF). 	<ul style="list-style-type: none"> • Participation in working group of the IRP Report to UNEA-3. • Active participation at IRP biannual meetings (18th and 19th Meeting of the IRP). • Support in organization of IRP session at World Science Forum 2017 • Recommendation of experts for ongoing work streams, including land restoration, • Recommendation of Panel Members 	Collaboration coordinated by the IRP Secretariat with ICSU focal point Lucilla Spini.	<ul style="list-style-type: none"> • Engage and provide input to the United Nations Major Group on Science and Technology. • Involve ICSU in expert mobilization for Panel, Working Groups, Peer Review; in particular for HIPA 3 (socio-economic implications) as they will soon merge with the International Social Science Council. • Organize joint launch and/or dissemination and capacity development events.
International Union for Conservation of Nature (IUCN) IRP Strategic Partner	<ul style="list-style-type: none"> • A membership Union made up of 1,300 civil society and government members, and benefitting from the inputs from 16,000 experts in providing public, private and non-governmental organizations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together. • IUCN experts are organized into six commissions dedicated to species survival, environmental law, protected areas, social and economic policy, ecosystem management, and education and communication. 	Recently re-established contact and interest in the work of the IRP. Nominated focal point confirmed interest in continued engagement with the IRP.	Collaboration coordinated by the IRP Secretariat with IUCN focal point Inger Andersen.	<ul style="list-style-type: none"> • Involve IUCN in expert mobilization for Panel, Working Groups, Peer Review. • Organize joint launch and/or dissemination and capacity development events. • Involve IUCN in report development, particularly for HIPAs 3 and 4.





The following images provide an overview of main engagements envisioned with priority core audiences as per action plan above:

Intergovernmental platforms				
Priority core audiences	2018	2019	2020	2021
 HLPF	Provide inputs to the 2019 GSDR team Present IRP inaugural report at the 2018 HLPF (July 2018)	Secure slot/ organize side event to launch/present results from HIPA 1 and/or 2 at the 2019 HLPF (July 2019). Participate in launch of 2019 GSDR team (2019)		
 UNEA	Provide information to weekly meetings of the Committee of Permanent Representatives Interact with the UNEA Bureau on a more regular basis Steering Committee to propose resolutions informed by the work of the IRP	Secure high-level slots and opportunities to present IRP reports at UNEA-4 and 5, in particular for the launch of the first Global Assessment on Natural Resources		
 10YFP	Formalize a strategic partnership with the 10YFP Secretariat Inform strategic planning process for the 10YFP 5-year work plan Develop joint key messages on benefits of resource efficiency and SCP Develop joint communication on SCP (incl. joint event for the 2018 HLPF focusing on SDG 12) Inform policy toolkit on LCA in SCP prepared by the 10YFP and the lifecycle initiative Coordinate when reporting to HLPF of SDGs 12 and 8 Reach civil society and private sector audiences through the 10YFP multi-stakeholder network Exchange information collected by 10YFP on SCP policies, to inform IRP work, in particular for HIPAs 1 and 2	Inform 10YFP policy documents, programme development and monitoring, capacity development, and organizing joint dissemination events (online and otherwise) Summarize findings from "GANRUM" report to inform future development of 10YFP programmes		
 ipcc	Formalize a strategic partnership with IPCC Secretariat Engage IPCC authors in IRP Working Groups of HIPA 2 Develop joint documents and/or communications products with IPCC on the linkages between resource efficiency and climate change	Organize joint launch events for HIPA 2		
 ipbes	Formalize a strategic partnership with IPBES Secretariat Engage IPBES authors in IRP Working Groups of HIPA 1	Develop joint documents and/or communications products with IPBES on the linkages between resource efficiency and biodiversity Organize joint launch events for HIPA 1		

Economic Platforms



Priority core audiences	2018	2019	2020	2021
	Respond to invitation from G7, by developing the IRP report on resource efficiency and climate change			
	Steering Committee members who are also G7 members to support dissemination of IRP report within the platform, in particular with upcoming presidencies (Canada in 2018 and France in 2019)			
	Organize dissemination events at G7 summits			
	Inform/organize joint events with the G7 Alliance on Resource Efficiency			
 G20	Tailor IRP material to information needs from the group (e.g. sustainable management of water, implementation of SDGs related to natural resources, deepening the understanding of global resource flows, modelling and scenario development, exchange of good practices in policy and business for resource efficiency, etc.)			
	Steering Committee members who are also G20 members to support dissemination of IRP material within the platform, in particular with upcoming presidencies (Argentina in 2018 and Japan in 2019)			
	Organize dissemination events at G20 summits			
	Inform/organize joint events with the Global Alliance on Resource Efficiency			
	Engage OECD experts in IRP Working Groups for HIPAS 1 (trends of resource use), 2 (climate change) and 3 (socio-economic implications)			
	Create expertise linkages in OECD initiative on Circular Economy			
	Develop joint science-policy documents on socio-economic implications of resource efficiency			
	Organize joint dissemination events			

Regional Policy Platforms

Priority core audiences	2018	2019	2020	2021
 European Commission	Link IRP work to EC initiatives on the Circular Economy, including on monitoring and on plastics			
	Consider the participation of EC experts in relevant IRP Working Groups, in particular HIPAs 1 and 2			
	Propose to the EU Presidency to present IRP relevant work to the Council Working Party on International Environment Issues (WPIE), the Working Party on Environment (WPE) or any other Council working party of relevance			
	Explore possibilities for joint dissemination and awareness events on HIPAs and related work			
	Mobilize EC support for greater involvement of the IRP in G7 and G20 and for the organisation of events related to G7/G20 processes			
 ASEAN+3	Build relationship with ASEAN Secretariat through collaboration in regional science-policy events, including at the biannual ASEAN Summits in 2018-2021			
	Involve ASEAN in consultation process for new expertise requirements			
	Develop joint documents and/or communications products regionally tailored with the cooperation of UN Environment Regional Office for Asia Pacific for HIPAs 1, 2, 3, and 4			
	IRP to inform the South Asia Forum on SCP launched by South Asia Co-operative Environment Programme (SACEP)			
			Organize joint launch and/or dissemination and capacity development events, in particular for HIPA 1	
 *	Formalize a strategic partnership: IRP provides information to ECLAC on a regular basis and ECLAC provides access to regional networks			
	Involve ECLAC in consultation process for new expertise requirements			
	Engage ECLAC experts in IRP Working Groups of HIPAs 1 (trends), 3 (socio-economic) and 4 (migrations)			
		Develop joint documents and/or communications products for HIPAs 1 and/or 4		
			Organize joint launch and/or dissemination and capacity development events, in particular for HIPAs 1 and 4	
 African Union	Present IRP findings and tailor key messages to Africa natural resources challenges and opportunities through African Union events			
	•Collaborate with the “African Commodity Strategy” flagship initiative (modalities to be defined)			

* The Regional Commissions of ECLAC is given as an example of engagement that could be pursued with other United Nations Regional Commissions (e.g., ESCAP).

Academic Networks and Research Institutions

Priority core audiences				
	2018	2019	2020	2021
 International Council for Science	Engage and provide input to the United Nations Major Group on Science and Technology			
	Involve ICSU in expert mobilization for Panel, Working Groups, Peer Review; in particular for HIPA 3 (socio-economic implications) as they will soon merge with the International Social Science Council			
	Organize joint launch and/or dissemination and capacity development events			
 IUCN	Involve IUCN in expert mobilization for Panel, Working Groups, Peer Review			
	Organize joint launch and/or dissemination and capacity development events			
	Involve IUCN in report development, particularly for HIPAs 3 and 4			

5.2. IRP ENGAGEMENT STRATEGY: THE PRIVATE SECTOR

The Secretariat identified a preliminary long list of IRP core audiences from the private sector taking into consideration feedback received from IRP members, the mandate and expected impact of the IRP, as well as the relationships built over the last 10 years (see **Annex 6**). A shorter list was then developed considering existing strategic partnerships, on-going discussions of collaboration, input received from the Strategic Action Group of the IRP, UN Environment, and external experts during the 2017 Strategic Planning Exercise; relevance to the IRP's overall mission, theory of change, and potential high-impact priority areas for 2018-2021; as well as the results of an impact-driven desk review of private sector stakeholders.

The image below reflects the results of the analysis. Actors are not presented in order of importance but by source of selection. Based on the outcomes of further outreach and engagement with the identified bodies, at least two of these priority private sector platforms will be targeted as an official IRP Strategic Partner in the coming cycle: the World Economic Forum (WEF) and the Ellen MacArthur Foundation (EMF)³³.

It is suggested to focus engagement with the following private sector actors in 2018-2021 (the collaboration could be in general or for a specific report):

		Preliminary assessment of relevance (details in Annex 1)				
		Interest to work with IRP	Reach	Social media / Online exposure	Knowledge creation	Absence of reputational risks
Inputs to select the short list	Current strategic partner or collaboration currently being discussed with the IRP	Potential partners				
Suggested by SAG, UN Environment or SYSTEMIQ	Overall Sustainable Resources Management	1 World Resources Institute	●	●	●	●
		2 World Business Council for Sustainable Development *	●	●	●	●
Highest scores on desk review based on publicly available data	Energy	3 World Economic Forum**	●	●	●	●
		4 Green Growth Knowledge Platform	●	●	●	●
Relevant to IRP's mission and theory of change	Extractive industries	5 Ellen MacArthur Foundation**	●	●	●	●
		6 Global Business Coalition	●	●	●	●
	Food, land use, agri.	7 Business Sustainable Development Commission	●	●	●	●
		8 International Chamber of Commerce *	●	●	●	●
	Consumer goods	9 SUN *	●	●	●	●
		10 Energy Transition Commission	●	●	●	●
	Water	11 International Council on Mining & Metals	●	●	●	●
		12 Extractive Industries Transparency Initiative	TBD	●	●	●
	Finance	13 Sustainable Agriculture Initiative	TBD	●	●	●
		14 The Consumer Goods Forum	TBD	●	●	●
		15 2030 Water Resources Group	TBD	●	●	●
		16 Climate Finance Lab	TBD	●	●	●
		17 Global Impact Investing Network	TBD	●	●	●
		18 UN Environment Finance Initiative	●	●	●	●

33 A memorandum was prepared from the IRP Co-Chair to WRF laying out ideas for cooperation. This document is included in Annex 6. The Strategic Partnerships proposed with WEF and EMF to be consulted with SC and Panel Co-Chairs as per IRP procedures. Approval and formalization will occur after approval of this Work Programme.

**Currently an IRP Strategic Partner.*

***These stakeholders will be approached for a strategic partnership. Strategic partners are targeted to bring diverse perspectives to the IRP work, including those of civil society, academia, and the social sciences. The organizations identified for strategic partnership in the table above have been selected for their potential impact and interlinkages with intergovernmental platforms. This list is indicative, and will change in accordance with IRP research needs and evolving international priorities. Some of the above listed Strategic Partnerships are further elaborated in the below strategy. Ultimately, the IRP will strive to formalize at least two new strategic partners, as well as increase engagement and interaction with existing partners, in the coming work cycle.*

To ensure the IRP's credibility and independence are safeguarded, the following models of engagement with private sector core audiences are proposed:

What could private sector platforms bring to the IRP?		What could private sector platforms expect from the IRP?	
Resources	<ul style="list-style-type: none">• Provide in kind support• Provide un-earmarked financial support (within limits established by IRP Policies and Procedures)	Science for politically relevant topics	Feedback, insights, data, foresight from IRP publications which are shaping current influential debates (e.g., G7)
Report Development	<ul style="list-style-type: none">• Become a working group member.• Be part of a stakeholder consultation or peer review process.• Share proprietary data/insights/case studies.• Contribute to report chapters/sections.	Science for topics of interest	Feedback, insights, data, foresight from IRP publications on specific topics of relevance to the platform. Global, developed and developing country perspective on topics of interest.
Dissemination	<ul style="list-style-type: none">• Disseminate IRP findings through online platforms, events, publications.• Host IRP side events or provide a slot in key events• Facilitate contact with members of their network	Dissemination	A UN platform to convene regular gatherings to connect actors and showcase their publications, tools, events
		Access to IRP networks	<ul style="list-style-type: none">• Access to top resource scientists and researchers.• Access to countries or regional representatives
Boundaries of private sector engagement			
<ul style="list-style-type: none">• Platform will not participate in the decision-making process for approval of IRP publications.• Platform must consult with the IRP before displaying IRP’s name on any publication or material (online or physical).• In case of a financial contribution, funding must remain below funding threshold set by Policies and Procedures and should be approved by the Steering Committee. The contribution should not imply interference with the report development process.• Private sector actors contributing to the report development do so in their individual capacities and on a pro-bono basis.• Total transparency regarding support (financial or in-kind) and information provided to IRP Working Groups by private sector experts as members of the Working Group or Peer Reviewers.• IRP to develop and adopt a Conflict of Interest Policy as part of the Policies and Procedures. IRP Co-Chairs to review potential conflicts of interest of private sector experts prior to approval of Working Group contribution.			

In the 2015-2017 cycle, the IRP formalized Strategic Partnerships with three private sector platforms: SUN Institute for Environment and Sustainability (SUN), the International Chamber of Commerce (ICC); and the World Business Council for Sustainable Development (WBCSD). An interview was carried out with the latter to reactivate engagement and agree on collaboration areas in the new cycle. Ideas for continued collaboration with these Strategic Partners in the 2018-2021 cycle are included in a table below.

Additionally, discussions on concrete collaboration have initiated with a group of another seven platforms from the shortlist above. These were selected based on breadth of scope (priority was given to players within the “Overall Sustainable Resources Management” category); interest expressed by the platform to work with the IRP; and existence of close contacts within these organisations to facilitate and accelerate outreach. More details on the interviews carried out can be found in **Annex 6**.

Considering current strategic partners, the results from the desk review and interviews, as well as the need to focus efforts under constrained resources, **ten pilot collaboration projects are here proposed for 2018-2021** (included in the table below). In addition to these, a focus group would be established with members of the priority platforms to serve as an informal dialogue mechanism with individual private sector actors. The group would be convened annually by the Secretariat to discuss on-going work of the IRP in an informal setting.

Private Sector Platform	Collaboration on Report development	Collaboration on Dissemination	Financial or in-kind contribution
IRP Strategic Partners			
International Chamber of Commerce (ICC) ³⁴	<ul style="list-style-type: none"> • ICC to recommend members for working groups and peer review of IRP publications and products. • ICC to support stakeholder engagement with the private sector to feed into ongoing research streams. 	<ul style="list-style-type: none"> • Cross-dissemination of ICC/IRP reports at major dissemination events or webinars of each platform and through social media accounts. • IRP to participate in ICC Events to share findings relevant to private sector from previous and ongoing research (especially HIPA-1, HIPA-2 and HIPA-3). • IRP and ICC to deliver capacity building (including through ICC online platform) targeting the private sector based on IRP research. 	Partnering to organize side/other events targeting the private sector.
World Business Council for Sustainable development (WBCSD) Current strategic partner	<ul style="list-style-type: none"> • The IRP to inform WBCSD decisions, programmes, documents, and activities on Circular Economy, particularly with IRP work on HIPAS 1, 2 and 3, as well as on cities and remanufacturing . This could be done through the participation of IRP experts in a WBCSD advisory group (these groups meet via phone once a month and twice or three times per year in person). Particular 	Cross-dissemination of WBCDS/IRP reports at major dissemination events or webinars of each platform and through social media accounts.	

³⁴ Collaboration actions to be confirmed with ICC.

	<p>points of interest include providing businesses with metrics and orientation values that help them keep track of their progress on adopting circularity; the connection between climate change and circular economy; and the socio-economic implications of circular economy within the framework of the 2030 Agenda for Sustainable Development.</p> <ul style="list-style-type: none"> • WBCSD to inform IRP report development process through stakeholder consultation and/or peer review. 		
SUN Institute for Environment and Sustainability (SUN)	SUN to provide input on private sector perspective in the development and implementation of the IRP Work Programme, in particular for the work on HIPA 1 (Trends on Natural Resource Use).	SUN to support preparation of documents, presentations and organization of events for the dissemination of IRP's work, in particular to priority private sector audiences.	<ul style="list-style-type: none"> • SUN to provide in-kind support for the preparation of material, organization of joint events and mobilization of private sector leaders. • SUN to provide a financial contribution of US\$300,000 in 2017, 2018 and 2019 to support the work on scenario modelling within HIPA-1.
New collaborations			
World Resources Institute (WRI)	Conversation on-going. Collaboration mechanisms to be discussed in 2017.	Conversation on-going. Collaboration mechanisms to be discussed in 2017.	Conversation on-going. Collaboration mechanisms to be discussed in 2017.
World Economic Forum (WEF)	<ul style="list-style-type: none"> • IRP to Inform the Platform for Accelerating the Circular 	<ul style="list-style-type: none"> • Presentation of the IRP's Global Assessment on Natural Resource Use 	<ul style="list-style-type: none"> • WEF to provide in-kind support for the










Strategic Partnership candidate³⁵	<p>Economy (PACE) project and/or WEF projects more broadly related to sustainable resource management.</p> <ul style="list-style-type: none"> • IRP to inform one of WEF's priority research themes (e.g. Urban Bicycles). 	<p>and Management at the 2019 WEF meeting in Davos.</p> <ul style="list-style-type: none"> • Presentation of an update on the state of natural resource management at the WEF meetings in Davos in 2018, 2020 and 2021, and of any other relevant IRP reports as per WEF agenda. • Organization of an annual WEF-IRP dialogue with leading resource experts on selected topics. • Organize a session with visual elements of resource use implications based on IRP's work at the WEF meetings in Davos in 2018, 2019, 2020 and 2021. 	<p>organization of joint events and mobilization of private sector leaders.</p> <ul style="list-style-type: none"> • WEF to support the IRP in mobilizing funding from the private sector.
<p>Ellen MacArthur Foundation (EMF)</p> Strategic Partnership candidate	<p>EMF to contribute to the development of one of the reports in HIPA 3 (Socio-Economic Implications) as a Working Group member or through stakeholder consultation.</p>	<ul style="list-style-type: none"> • Joint launch and/or dissemination of the IRP report "The Weight of Cities: Resource Requirements for Future Urbanization" in 2019. • Joint preparation of dissemination products tailored to the private sector based on the IRP report "The Weight of Cities: Resource Requirements for Future Urbanization" in 2019. • Joint launch and/or dissemination of the IRP report "Assessment of resource Efficiency and Innovation in Circular Economy through Remanufacturing, 	<p>EMF to provide in-kind support for the organization of joint events, preparation of joint material, and mobilization of private sector leaders.</p>

³⁵ Both the WEF and the EMF have expressed interest in formalizing the relationship with the IRP through a strategic partnership agreement. Members will be informed about the status of these strategic partnerships at the 21st IRP meeting in Lima.

		<p>Refurbishment, Repair and Direct Reuse” in 2019.</p> <ul style="list-style-type: none"> Joint preparation of dissemination products tailored to the private sector based on the IRP report “Assessment of resource Efficiency and Innovation in Circular Economy through Remanufacturing, Refurbishment, Repair and Direct Reuse” in 2019. 	
Global Business Coalition (GBC)	GBC members to contribute to the development of certain IRP reports by participating in stakeholder consultation, peer review process and/or providing private sector insight, data or case studies.	<ul style="list-style-type: none"> IRP reports to be presented at resource efficiency events in 2018-2021 (calendar currently being decided by GBC). 	GBC to provide in-kind support for the organization of joint events and mobilization of private sector leaders.
Business Sustainable Development Commission (BSDC)	<ul style="list-style-type: none"> The “Blended Finance Initiative” network of experts to inform stakeholder consultations for the development of HIPA 3. IRP to inform the programme and events of the “Food and Land Use Coalition (FOLU). 		
Energy Transition Commission (ETC)	<ul style="list-style-type: none"> IRP members to inform ETC Working Group on decarbonization of hard-to-abate sectors. ETC to contribute to the development of one of the reports in HIPA 2 (resource efficiency and climate change) through stakeholder consultation and/or peer review. 	Cross-dissemination of ETC/IRP reports at major events of each platform and through social media accounts.	

<p>UN Environment Financial Initiative (UNEP Fi)</p>	<p>Direct use of IRP data/information or co-creation of information for the financial sector analysis and decision-making, particularly related to HIPA 2 (resource efficiency and climate change). This could inform the climate risk scenarios currently being developed by UNEP fi for the Task force on Climate-related Financial Disclosures (TCFD).</p>	<ul style="list-style-type: none"> • Creation of a three-way engagement platform between IRP SC, Panel and financial sector actors to exchange information on relevant topics such as the relationship between resource efficiency and climate change and the potential for positive impact financing of adaptation and mitigation; or financial risk management related to ecosystem services and sustainable land use. • Co-creation of tailored material for financial sector actors on financial risk and opportunity assessment based on IRP Scenario work (in particular data related to resource scarcity). 	
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The following image provides an overview of main engagements envisioned with priority core audiences from the private sector as per pilot collaboration

			2018	2019	2020	2021
Strategic Partners from Private sector	Current		Continue collaboration with current Strategic Partners (WBCSD, ICC, SUN)			
	New (suggested)		Formalize a strategic partnership with the WEF (ideally in UNEA-Dec 2017)			
			Formalize a strategic partnership with the EMF			
				IRP Secretariat to approach other actors in the shortlist for strategic partnership		
Private sector potential collaborations (short list)	Interviewed in Fall 2017		Direct use of IRP data/information or co-creation of information for the financial sector analysis and decision-making, particularly related to HIPA 2			
			Creation of a three-way engagement platform between IRP SC, Panel and financial sector actors			
				Co-creation of tailored material for financial sector actors on financial risk and opportunity assessment based on IRP Scenario work		
			IRP members to inform ETC Working Group on decarbonization of hard-to-abate sectors			
			ETC to contribute to the development of one of the reports in HIPA 2 through stakeholder consultation and/or peer review			
			IRP reports presented in GBC event - April 2018/ Canada			
			Contribution to IRP reports: stakeholder consultation, peer review and/or providing private sector insight, data/ case studies			
			"Blended Finance Initiative" network of experts to inform stakeholder consultations for the development of HIPA 3.			
			"IRP to inform the programme and events of the "Food and Land Use Coalition (FOLU)"			
			Conversation on-going. Collaboration mechanisms to be discussed in 2017			
	Other players from the short list		IRP Secretariat to approach other actors in the shortlist for engagement, ad hoc collaboration at report level, joint dissemination events			
Private Sector Focus Group			Set up the Focus Group	Annual consultation / workshop	Annual consultation / workshop	Annual consultation / workshop

projects above:

6. MOBILIZING FINANCIAL AND IN-KIND SUPPORT FOR EFFECTIVE DELIVERY

The 2018-2021 Work Programme as described in this document is an ambitious yet realistic one. If the IRP wishes to achieve the desired impact, funding must match impact expectations.

The following table shows an estimated budget of US\$7,350,000 for the implementation of the 2018-2021 work cycle as per areas, products and stakeholder engagement strategies identified in this document. Estimates consider carry over from previous cycle, plus new workstreams as per average cost of report development, dissemination, and capacity development (including staffing and travel needs)³⁶.

All figures in 1000 US\$		2018	2019	2020	2021	Total
Ongoing work streams	Remarks					
Cities II: Resource requirements of future urbanization	Report is almost finalized but still need printing, launching, etc. It is estimated that this is equivalent of a 90% completion by the end of 2017. Thematic Assessment.	125				125
Resource Efficiency and Innovation in Circular Economy through Remanufacturing, Refurbishment, Repair, and Direct Reuse	Report is almost finalized but still need printing, launching, etc. It is estimated that this is equivalent of a 65% completion by the end of 2017. Thematic Assessment.	125				125

³⁶ The average cost of an IRP report amounts to US\$430,000, with significant differences depending on the scope and nature of the publication. In estimating the cost of implementation, the following figures were applied: US\$500,000 for a full assessment and US\$250,000 for a think piece. This estimate includes all costs of contracting, editing, printing, working group meetings, communication, secretariat support, general administration and a proportional share of IRP meetings. No detailed costing beyond the assessment/think piece distinction is attempted. Detailed costing will be added to successive annual budgets as more information becomes available.

The Impacts of Land-Based Activities on Marine and Coastal Resources and Environment	Work is ongoing and assessed at 40% completion by the end of 2017. Cost include two stakeholders workshops (for aquaculture and coastal mining), editing, design, layout, printing, launch and dissemination activities. Remaining cost have been spread over 2 years to account for launch and dissemination activities, etc. Thematic Assessment.	125	125			250
Mineral Resource Governance for Sustainable Development	Work is ongoing and assessed at 50% completion by the end of 2017. Remaining cost have been spread over 2 years to account for launch activities, etc. Thematic Assessment.	125	125			250
Land Restoration	Think Piece is almost finalized but still need printing, launching, etc. It is estimated that this is equivalent of a 80% completion by the end of 2017.	50				50
Material Demand Projections based on Historical Data	Think Piece is almost finalized but still need editing, layout, printing, launching, etc. It is estimated that this is equivalent of a 80% completion by the end of 2017.	50				50
New work streams	Remarks					
Metrics and data for sustainable resource use	<p>The work under this item is for:</p> <ul style="list-style-type: none"> • Regular data base updates • Extension to additional footprints (water, land, energy) • Linkages to impact (environmental, social, economic) • Use of data for scenario and modelling efforts for regular IRP reporting • Capacity building courses and workshops for countries to use the data set <p>As such it has been estimated at 'a quarter of a thematic assessment each year.</p>	125	125	125	125	500

Defining Sustainable Levels of Resource Use	Thematic assessment or think piece (to be decided in Lima)	250	250			500
Developing and Demonstrating Scenario Modelling of Integrated Natural Resource Use	Work is only starting up now and this will be an ongoing activity like the MFA work, but after an initial phase with a lower budget. Potentially rapid assessment as well as feeding into "Global Assessment on Natural Resource Use and Management" and "Resource Efficiency and Climate Change: A Request from the Group of 7".	250	250	125	125	750
Global Assessment On Natural Resource Use and Management	Work is only starting up now so most will be done in 2018 and 2019. An allocation of a full assessment over the following 4 years have been included to illustrate that it is a regular report (if approved by UNEA 4). Thematic assessment	250	250	125	125	750
Sustainable Resource Management within the Global Climate Change Agenda Part I: Resource Efficiency and Climate Change	Thematic assessment	250	125	125		500
Sustainable Resource Management within the Global Climate Change Agenda Part II: Leveraging Resources for a Low-Carbon, Climate-Resilient Development	Thematic assessment			250	250	500
Transition to a resource efficient economy	Think piece	250				250
Resource governance in light of Fundamental transitions in Systems of Production and Consumption	Think piece			250		250
Managing the World's Natural Resources for the benefit of all	Thematic assessment		250	125	125	500

Resources and Finance	Thematic assessment		125	250	125	500
Sustainable Resource Management links to Conflict and Migration	Thematic assessment	250	250			500
Contingency for other potential proposals and/or tailoring of IRP publications for core audiences		250	250	250	250	1000
Total		2475	2125	1625	1125	7350

As per articles 9 and 10 of the IRP Policies and Procedures; OECD SC members shall provide annual financial contributions to the IRP, and non-OECD SC members shall strive to provide these. Both groups may provide in-kind support to the IRP. Considering levels of ambition for this Work Programme, in particular in developing flagship assessments and tools like the Regular Report and the modelling of integrated resource management, or in reaching out to a large group of new audiences, there is a need to mobilize larger and more stable funding to ensure annual income levels in the range of US\$ 2,300,000.

Historically, the IRP has relied on ad-hoc annual contributions from OECD SC members, 50% of which comes from one of the donors (European Commission). Funding levels may decrease unexpectedly within a cycle of 4 years. Therefore, for the effective implementation of this Work Programme, the IRP will need to ensure compliance of funding requirements by all SC OECD members; receive more systematic in-kind contributions from Panel and SC members as well as strategic partners; and tap into new sources of funding (including the private sector) to mitigate risks.

SOURCES OF FUNDING

Main target sources of funding for 2018-2021 will include Steering Committee members, Strategic Partners and the private sector. The latter is proposed in accordance with section 5.2 of this document.

Regarding private sector funding, the IRP will approach foundations as a priority source. Other private sector platforms like business coalitions or associations could be mobilized (rather than individual companies). Support from these groups could be as follows:

Types of private sector support		Examples
Financial	Philanthropic funding	• Donation, for a targeted report/ work or overall
	Remuneration for a service	• Outsourcing of academic research to complement a report published by a private sector coalition/ business association
In-kind	Staff	• Dedicated human resources to support the IRP work, e.g., communication professional to prepare tailored supports for dissemination of IRP reports towards private sector, analyst to consolidate industry data for the IRP
	Logistical support	• Provision of a location/ catering for an IRP launch event
	Data	• Access to proprietary database for further development by the IRP

When providing contributions to the IRP, private sector platforms could request:

- Funding to be used for a specific report without interfering in the report development process.
- Acknowledgement on the IRP website or IRP reports.
- Invitation to some conferences where the IRP is presenting results of its research.
- Updates on the IRP report progress through regular line of reporting.
- Use of IRP logo on its own communication material if authorized.

To safeguard the IRP's independence and credibility, the following boundaries have to be explicitly mentioned when approaching potential private sector donors:

- Funder will not participate in the decision-making process for approval of IRP publications.
- Funder must consult with the IRP before displaying IRP's name on any publication or material (online or physical).³⁷
- Funding must remain below funding threshold set by Policies and Procedures and should be approved by the Steering Committee. The contribution should not imply interference with the report development process.
- Total transparency is required regarding support (financial or in-kind).

TARGETS AND ACTIONS

The following are the proposed resource mobilization targets and actions per funding source proposed for 2018-2021:

STEERING COMMITTEE AND STRATEGIC PARTNERS

The proposed **targets** in relation to Steering Committee members are to:

Targets	1 Increase overall financial and in-kind contribution from current Steering Committee members and Strategic Partners
	2 Increase compliance rates of financial obligations from OECD members
	3 Expand the donor base

The envisioned **actions** to achieve the targets above are as follows:

³⁷ A clear decision process on this boundary to be developed before an agreement with the funder is reached.

Action plan	a	Engage in close communication with all OECD members of the Steering Committee to ensure compliance of Articles 9 & 10 of the IRP Policies and Procedures. Transparency about contributions and due acknowledgment of donors will be ensured by the IRP Secretariat
	b	Increase the SC membership base with additional OECD members and other developed countries who could provide a financial contribution (e.g. United Arab Emirates, Bahrein, Singapore)
	c	Agree on a specific contribution (financial, in-kind or counterpart contribution) from emerging economies and strategic partners, including but not limited to funding of travel to IRP related meetings
	d	Seek non-earmarked funding with simplified reporting requirements
	e	Encourage members and strategic partners to provide recommendations for the mobilization of additional resources
	f	Encourage all members and strategic partners to fundraise for IRP activities (e.g. via regional opportunities such as APN http://www.apn-gcr.org/ , or via thematic opportunities such as L'Oréal Foundation)
	g	Encourage all members and strategic partners to provide at least one in-kind annual contribution. They could include but not be limited to <ul style="list-style-type: none"> • Secondment or staff-loan to work at the IRP Secretariat for a fixed term. • Pro-bono staff-time dedicated to IRP activities. • Pro-bono translations of summaries of scientific studies and assessments. • Pro-bono development of outreach materials (e.g. MOOC, infographics, video). • Facilitation and support for the preparation of national or regional scientific studies and assessments based on IRP global assessments. • Organization, support and hosting of dedicated national or regional launches and special events including information sessions among relevant ministries/counterparts at regional level. • Organization and hosting of working group meetings (with back-to-back country dialogues/capacity building events). • Organization and hosting of back-to-back events in regional platforms events (e.g. ASEAN annual meetings). • Funding of travel and accommodation to IRP related meetings

PRIVATE SECTOR

Proposed **targets** would include:

Targets	1	Prepare a document with a list of practical options for private sector to contribute to the development of the HIPAs and/or implementation of the 2018-2021 IRP Work Programme
	2	Hold at least 15 discussions between potential funders from the private sector by 2021
	3	Obtain funding from at least 2 private sector sources in accordance with boundaries listed above

The envisioned **actions** to achieve the targets above are as follows:

Action plan	a Identify practical options which could be explored with each one of the prioritized private sector partners identified in the private sector engagement strategy
	b Test these practical options when relationship is started with private sector audiences
	c Create a close collaboration with private sector unit within UN Environment to maximise synergies and increase visibility for the mobilization of funds




7. MONITORING OUR SUCCESS

Progress on the implementation of this Work Programme will be presented by the IRP Secretariat at every biannual meeting of the IRP. The following templates will be used to report on progress of main building blocks of the IRP 2018-21 Work Programme:

DEVELOPING SOLID POLICY-RELEVANT SCIENCE

HIPAs	Report	Status	Next steps	TORS	1 st draft	Peer review	2 nd draft	Ready for publication
HIP A 1: Current Trends And Future Prospects For Global Resource Use And Sustainable Resource Management	Metrics And Data For Sustainable Resource Use (Material Flows Database)							
	Defining Sustainable Levels Of Resource Use							
	Developing And Demonstrating Scenario Modelling Of Integrated Natural Resource Use							
	Global Assessment on Natural Resource Use and Management (Regular report)							
HIP A 2: Sustainable Resource Management Within The Global Climate Change Agenda	Part I: Resource Efficiency and Climate Change - A Request from the Group of 7							
	Part II: Leveraging Resources for a Low-Carbon, Climate-Resilient Development							
HIP A 3: Socioeconomic Implications Of The Transition To More Resource Efficient Economies And Societies	Transition To A Resource Efficient Economy							
	Resource Governance in Light of Fundamental Transitions in Systems of Production and Consumption							
	Managing the World's Natural Resources for the Benefit of All: Concept Note on Distributional Effects of Decoupling and Resource Efficiency							
	Resources and Finance: the Cost of Resource Efficiency and the Finance and Investment System We Want for Transformation							
HIP A 4: Sustainable Resource Management Links To Conflict And Migration	Sustainable Resource Management Links To Conflict And Migration							














STRENGTHENING THE IRP STEERING COMMITTEE

 On track / in line with strategy
  Delays but mitigation plan in place
  Obstacle to be discussed

Strategic Actions	Status	Main achievements in the past 6 months	Next steps
Increase the interest and engagement/ active involvement of the IRP Steering Committee members			
Increase the visibility and outreach of the IRP through the support of the SC			
Strategically expand the SC membership base to 35 members: 3 African countries, 2 LAC countries, 1 Asian & Pacific country, 2 OECD/developed countries (preferably from any of the priority Economic or Regional Platforms included in section 5.1) to:			
Increase overall financial and in-kind contribution from current SC members, increase compliance rates of financial obligations from OECD members and expand the donor base (as reflected in Section 6)			

ENGAGING MORE AND BETTER WITH CORE AUDIENCES

● On track / in line with strategy
 ● Delays but mitigation plan in place
 ● Obstacle to be discussed




Priority core audiences	Status	Main achievements in the past 6 months	Next steps
HPLF  HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT			
UNEA 			
10YFP 			
IPCC 			
IPBES 			
G7 			
G20 			
OECD 			
European Commission 			
ASEAN+3 			
UN Regional Commissions			
African Union  African Union			
ICSU 			
IUCN 			

ENGAGING MORE AND BETTER WITH THE PRIVATE SECTOR

● On track / in line with strategy
 ● Delays but mitigation plan in place
 ● Obstacle to be discussed

Priority core audiences	Status	Main achievements in the past 6 months	Next steps
Current Private Sector Strategic Partners			
New Private Sector Strategic Partners			
Other Private Sector engagement/ collaborations			

RESOURCE MOBILIZATION

 On track / in line with strategy
  Delays but mitigation plan in place
  Obstacle to be discussed

		Status	Main achievements in the past 6 months	Next steps
STEERING COMMITTEE AND STRATEGIC PARTNERS	Engage in close communication with all OECD members of the Steering Committee to ensure compliance of Articles 9 & 10 of the IRP Policies and Procedures. Transparency about contributions and due acknowledgment of donors will be ensured by the IRP Secretariat			
	Increase the SC membership base with additional OECD members and other developed countries who could provide a financial contribution (e.g. United Arab Emirates, Bahrein, Singapore)			
	Agree on a specific contribution (financial, in-kind or counterpart contribution) from emerging economies and strategic partners, including but not limited to funding of travel to IRP related meetings			
	Seek non-earmarked funding with simplified reporting requirements			
	Encourage members and strategic partners to provide recommendations for the mobilization of additional resources			
	Encourage all members and strategic partners to fundraise for IRP activities (e.g. via regional opportunities such as APN http://www.apn-gcr.org/ , or via thematic opportunities such as L'Oréal Foundation)			
	Encourage all members and strategic partners to provide at least one in-kind annual contribution. They could include but not be limited to			
PRIVATE SECTOR	Identify practical options which could be explored with each one of the prioritized private sector partners identified in the private sector engagement strategy			
	Test these practical options when relationship is started with private sector audiences			
	Create a close collaboration with private sector unit within UN Environment to maximise synergies and increase visibility for the mobilization of funds			