**Appendix: Four Workshops of the Global Sustainability Strategy Forum**

Human activities are a heavy burden on ecosystems with extensive loss as a result of climate change and different forms of pollution. The impacts on the Planet foretell irreversible losses of biodiversity and scarcity of resources putting the integrity and survival of Humanity at stake.

In this context, the scientific community (broadly encompassing social science, natural science, and humanities) is faced with a fundamental responsibility of providing guidance and best practices forsustainable lifestyles that are practical and appealing in the different regions and cultures of the world. This requires not only the (re-)organization and restructuring of research and education to facilitate effective interdisciplinary work and building capacity for addressing complex system issues, but also the substantial increase of engagement in mutual learning practices with policymakers and stakeholders from business and civil society groups. The broader engagement with society is essential to comprehend processes of change, design strategies for change, and catalyze pathways to far-reaching and fundamental transformations at global to local scales. An important part of that process is understanding and supporting transitions from current, as well as long-standing, unsustainable practices to more sustainable pathways.

To understand how to better address the sustainability challenge as a whole and promote evidence-informed solutions for this needed societal transformation, the Institute for Advanced Sustainability Studies (IASS) and Arizona State University (ASU) launched, in 2018, the 3-year project “Global Sustainability Strategy Forum” (GSSF), funded by the Volkswagen Foundation. The knowledge is available and this topic has been studied for many decades, yet our collective behavior with respect to its impact on the environment has not significantly changed. The GSSF project proposes to bring sustainability experts together to create innovative insights and strategies to support effective governance of transitions to sustainability.

1. **Kick-off Workshop 4-8 March 2019 in Potsdam, Germany**

Under the patronage of Rita Süssmuth, former President of the German Bundestag, the kick-off Forum took place in Potsdam, on 4-8 March 2019, and counted with the participation of world-wide renowned experts in the field of sustainability science. The common goal and acceptance of the urgency of acting ensured a very cooperative atmosphere and professional exchange of opinions resulting in productive discussions about the sustainability challenges and proposed solutions to move forward.

According to these experts, our current reality is characterized by three major trends: globalization, digitalization and sustainable development. The interaction of these three, often mutually incongruous, trends will fundamentally change our current social, economic and ecological systems. Science has a twofold responsibility in this transformation. On one hand, it must shape research and education in order to strengthen interdisciplinary collaboration and the ability to solve complex systemic problems. On the other hand, it must work more intensively with representatives from the policy and practitioner communities, with business, civil society and the general public.

Bearing these challenges in mind, the scientists have defined eight central tasks for science, which they described in detail in a discussion paper: [How Science Has Become a Driving Force for Sustainability | Institute for Advanced Sustainability Studies (iass-potsdam.de)](https://www.iass-potsdam.de/en/news/how-science-has-become-driving-force-sustainability). These range from a better understanding of the interactions between globalization, digitalization and sustainable development to the creation of processes in which various actors jointly develop concepts for sustainable transformation and systemic approaches to the design of economic and political interventions.

1. **Supplementalworkshop - What will it take to transition to a sustainable future? – Washington, 22 January 2020**

A one-day supplemental GSSF workshop hosted by the Consortium for Science, Policy and Outcomes (CSPO) of Arizona State University (ASU) and co-organized by the IASS was held in ASU’s facility in Washington, DC on 22 January 2020. This event offered a valuable and important opportunity to engage with representatives of civil society, NGOs, and government agencies from the US and Europe. The discussion dealt with three questions: 1) what are the main challenges in developing movement toward sustainability from different sectors of society, 2) how can different disciplines and interests collaborate more effectively, and 3) how do or can the educational opportunities across the entire lifespan contribute in moving toward sustainability.

The workshop’s attendees shared their perspectives and expertise, and the responses were valuable contributions to further expand the questions addressed in the GSSF and improve the main findings of the project at the time.

1. **2nd Additional GSSF workshop – Science and Business: Working Together for Sustainability – Online, 22-24 March 2020**

Following the very positive feedback from all participants of the first Forum, Professor Ken Fukushi from the University of Tokyo, Professor Sander van der Leeuw and Professor Peter Schlosser from Arizona State University offered to co-sponsor and co-organize an interim GSSF workshop.

This Forum was originally planned to host participants in Bangkok but due to travel restrictions resulting from the global pandemic this event took place online via the zoom platform, on 22-24th of March, and counted with 25 participants and conveners. This event was mainly focused on understanding how science and business can help building sustainable societies. Experts and conveners built on prior developments of the GSSF project by incorporating the concerns, competencies, and creativity of business leaders engaged with the challenges of sustainability. By means of mutual-learning dialogues it was possible to reflect and share expertise on how to develop common strategic grounds for moving to just and equitable sustainable futures.

The forum discussions were driven by three guiding questions focused on the cooperation/collaboration between academic research and corporate work; its common priorities for the mid/long-term future; and the needed local/regional institutional frameworks supporting these two groups.

The participants devised several suggestions and recommendations for sustainability science to assist corporations and private business to move towards more sustainable practices in manufacturing and distributing goods and services. The main outcome of this workshop was the acknowledgement that effective and timely transformations towards sustainability will affect business operations and human consumption and sustainability science can assist in this process. For that fundamental changes are needed in how scientific inquiries are conducted and a structural renewal of collective decision making. Furthermore, there is not one overriding recipe for the necessary transformations but many different strategies and concepts that depend on regional and local conditions and contextual interdependencies.

A summary report with an extensive description of the main conclusions from this event has been elaborated and published online on the IASS webpage <https://publications.iass-potsdam.de/rest/items/item_6000171_1/component/file_6000172/content> (DOI: 10.2312/iass.2020.024).

1. **3rd and final GSSF – Sustainability, the Covid Crisis and the Responsibility of Science – Online, 14-16 October 2020**

The third and final Global Sustainability Strategy Forum took place online (via Zoom) on the 14-16th October 2020. This event happened during the ongoing global pandemic caused by the Covid-19 virus outbreak. This unprecedented crisis has affected every nation in the world, causing not only a large scale of human-life loss, but also extensive economic crisis resulting from the imposed measures to control the spread of the disease. Considering this, it was important to frame this event within the global reality and ask the participants to reflect and share their opinions on the link of the pandemic (and potential future similar crisis) with the sustainability issue.

In this final forum, the main topic addressed was the responsibility, priorities, and processes of scientific institutions and administrations in the context of the pandemic to address the sustainability issue. Group discussions revolved around the role of scientific institutions (such as universities and science academies) in facilitating the access and usability of sustainability knowledge for business communities, policymakers and the civil society, acknowledging that the challenges of sustainability are fundamentally shaped by social and cultural processes. Furthermore, other two core sessions of the workshop addressed the Science-policy nexus and the knowledge and orientation that can be offered to inform policies and multidisciplinary cooperation at different scales.

The final GSSF opened with a plenary session from Professor Coleen Vogel from the University of the Witwatersrand, South Africa, presenting her work on transformations, particularly in using the Expansive Learning Cycle with the City of Johannesburg. On the second day, the patron of the GSSF, Professor Rita Süssmuth also addressed the participants of this event. As a former President of the German Bundestag, she spoke of past similar situations while in office, reflecting on the lessons learned, and offering her expert insights on how essential it is for policymakers to work collectively with the scientific and business community during global crisis, be it a global pandemic or sustainability issues. The event concluded with a panel discussion among Dr. Andrej Heinke (Vice President, Corporate Foresight and Megatrends, Robert Bosch GmbH), Dr. Heide Hackmann (CEO, International Science Council), Professor Gary Dirks (Senior Director, Global Futures Laboratory and Director, LightWorks, Arizona State University, USA), and Toby Wardman (Head of Communication, SAPEA). This closing webinar was open to a wider audience and it counted with (at least) 30 additional attendees.

The strong commitment from all the 35 participants resulted in dynamic and intense discussions throughout the three-day event. Sustainability experts from many parts of the world and a variety of backgrounds and disciplines brought their knowledge and perspectives to the forum to forge a common recognition that serious change is urgently needed.

By focusing on the role of scientific institutions, the workshop developed a set of concrete recommendations for academic institutions to effectively promote sustainable development, starting with root organizational changes at those institutions. A new concept of linking science to similar efforts in the economic and political sector was formulated and the conditions for a more effective nexus between science and policymaking were addressed. This set of orientations promotes mutual-learning processes between academia and policymaking, making use and advancement of transdisciplinary methods, the promotion of interdisciplinary cooperation, the development of more contextual knowledge production and the inclusion of non-academic actors in designing and interpreting research activities.

A more extensive overview of the reflections and outcomes of this event will be presented in a short summary report (to be published on the IASS website).