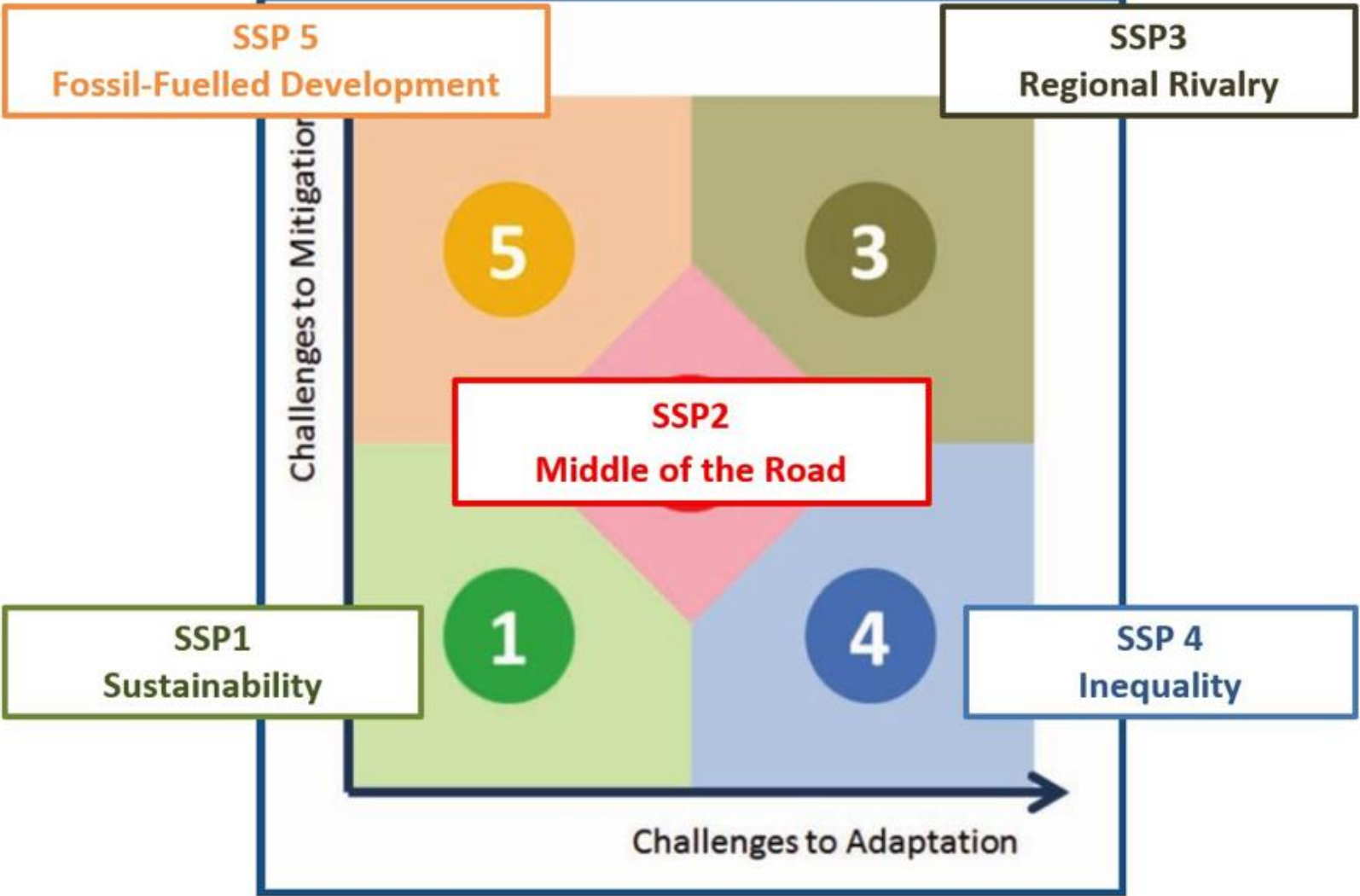


SHARED SOCIOECONOMIC PATHWAYS (SSPs)



SSP1: SUSTAINABILITY - TAKING THE GREEN ROAD

World shifts gradually towards a more sustainable path

- More inclusive development, with respect for environmental boundaries
- Management of global commons slowly improves,
- Demographic transition accelerates through investments in education and health, focus on human wellbeing
- Inequality is reduced both across and within countries
- Low material oriented consumption, low resource and energy intensity

SSP2: MIDDLE OF THE ROAD

The world follows a path in which social, economic, and technological trends do not shift markedly from historical patterns

- Development and income growth proceeds unevenly
- Global institutions work towards achieving sustainable development goals, with slow progress
- Degradation of environmental systems, although intensity of resource and energy intensity fall
- Population growth is moderate and levels off around 2050
- Income inequality persists, challenges to societal and environmental change remains

SSP3: REGIONAL RIVALRY – A ROCKY ROAD

A resurgent nationalism, concerns about competitiveness and security, and regional conflicts push countries to increasingly focus on domestic or, at most, regional issues

- Policies shift towards concern for national and regional issues only
- Countries focus on achieving energy and security goals within own border
- Investments in education and technology declines
- Economic development is slow, consumption is material intensive, inequalities persist
- Population growth is low in industrialized countries; high in low developing countries
- Low priority for international efforts for addressing environmental concerns; strong environmental degradation

SSP4: INEQUALITY – A ROAD DIVIDED

Highly unequal investments in human capital, combined with increasing disparities in economic opportunity and political power, lead to increasing inequalities and stratification both across and within countries

- Over time, a gap widens between:
 - internationally connected society that contributes to knowledge and capital intensive sectors, and a:
 - fragmented collection of lower-income, poorly educated societies that work in labor intensive low tech economies
- High technology development in high tech economy and sectors
- Globally connected energy sector diversifies
 - Investments in both carbon-intensive fuels and low-carbon energy sources
- Environmental policies focus on local issues around middle and high income areas

SSP5: FOSSIL-FUELED DEVELOPMENT – TAKING THE HIGHWAY

This world places increasing faith in competitive markets, innovation and participatory societies to produce rapid technological progress and development of human capital as the path to sustainable development

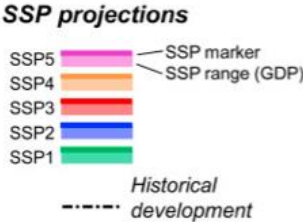
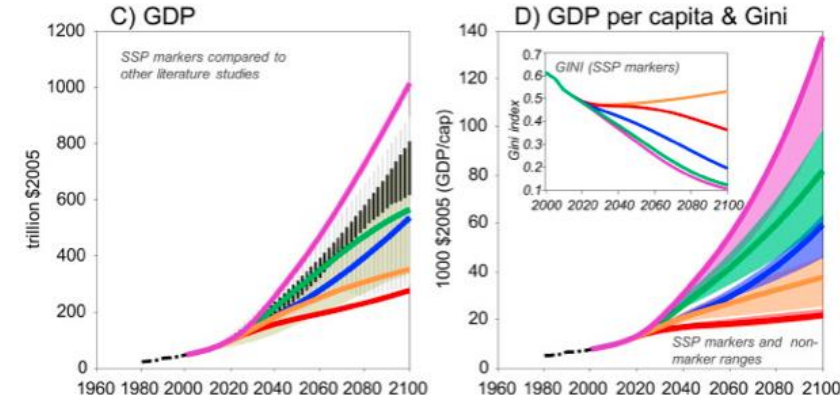
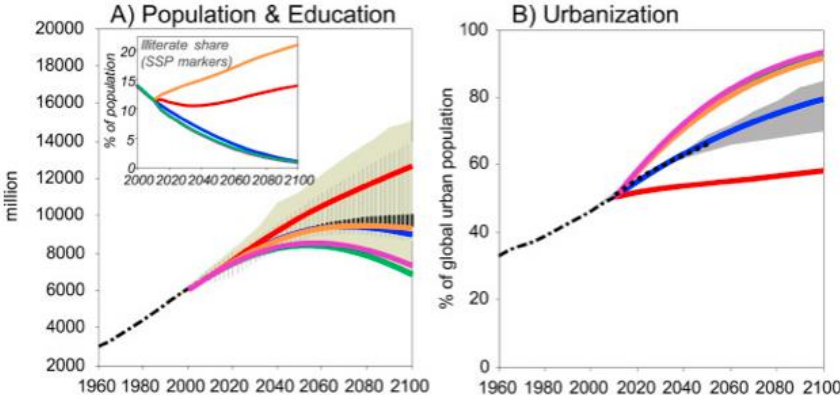
- Integrated global markets
- Strong investments in health, education, and human social capital
- At the same time, exploitation of abundant fossil fuel resources are paired with resource and energy intensive lifestyles
- Rapid economic and population growth
- Local environmental problems like air pollution are successfully managed

SHARED SOCIOECONOMIC PATHWAYS (SSPs)

Based on 5 narratives describing future socioeconomic trends:

1. SSP1: "Sustainability - Taking the Green Road"
 - Low challenges to mitigation and adaptation
 - A world of sustainability focused growth and equality
2. SSP2: "Middle of the Road"
 - Medium challenges to mitigation and adaptation
 - A world where trends broadly follow historical patterns
3. SSP3: "Regional Rivalry – A Rocky Road"
 - High challenges to mitigation and adaptation
 - A world of resurgent nationalism
4. SSP4: "Inequality - A Road Divided"
 - Low challenges to mitigation and high challenges to adaptation
 - A world of ever increasing inequality
5. SSP5: "Fossil-fueled Development – Taking the Highway"
 - High challenges to mitigation and low challenges to adaptation
 - A world of rapid and unconstrained growth in economic output and energy use

IPCC SSPs

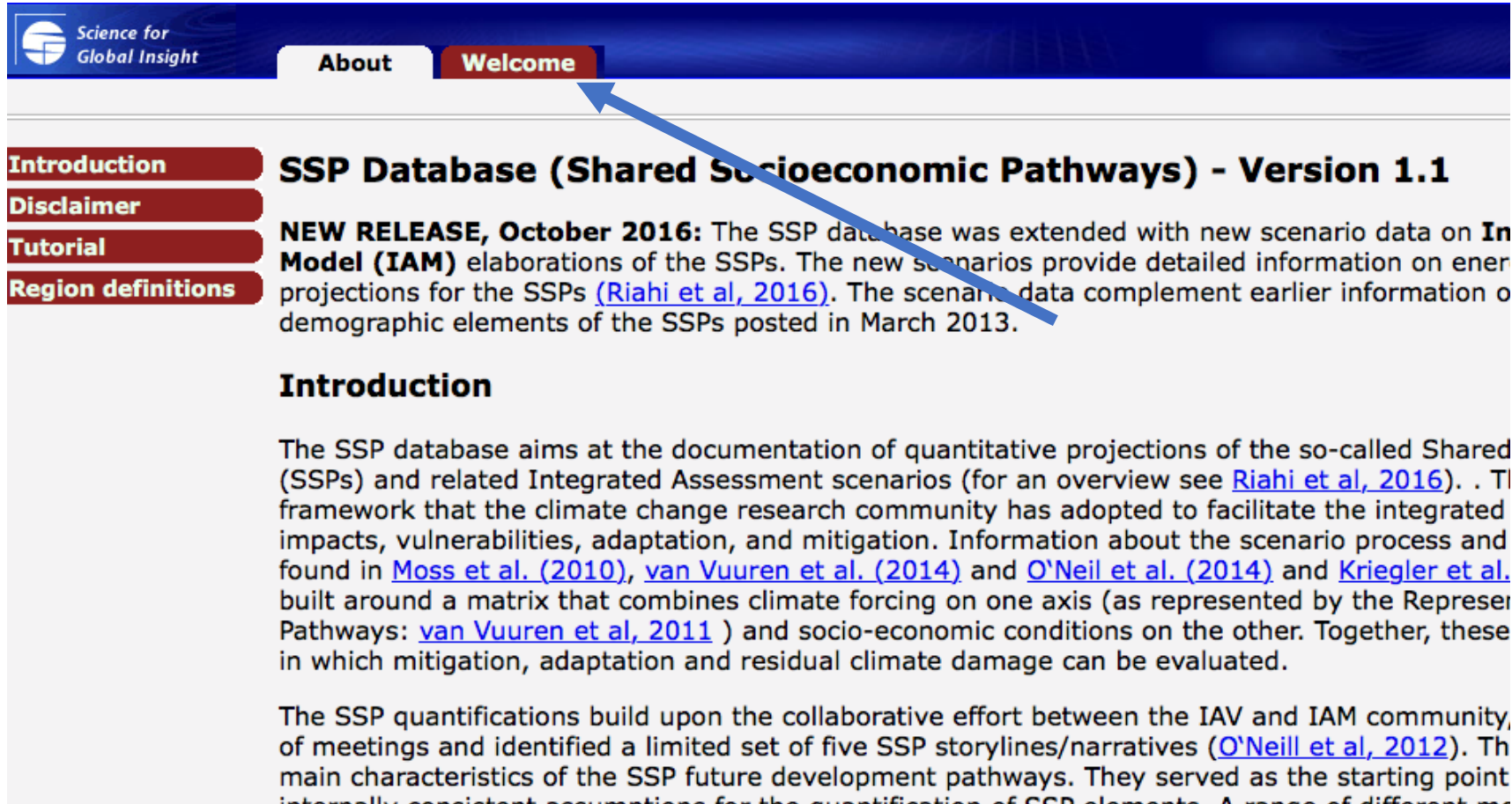


Source: Riahi *et al.* (2017)

WHERE CAN YOU ACCESS DATA?

Institute for Applied Systems Analysis (IIASA)

- What are socioeconomic drivers?



Science for Global Insight

About Welcome

Introduction

Disclaimer

Tutorial

Region definitions

SSP Database (Shared Socioeconomic Pathways) - Version 1.1

NEW RELEASE, October 2016: The SSP database was extended with new scenario data on **Integrated Assessment Model (IAM)** elaborations of the SSPs. The new scenarios provide detailed information on energy projections for the SSPs ([Riahi et al, 2016](#)). The scenario data complement earlier information on demographic elements of the SSPs posted in March 2013.

Introduction

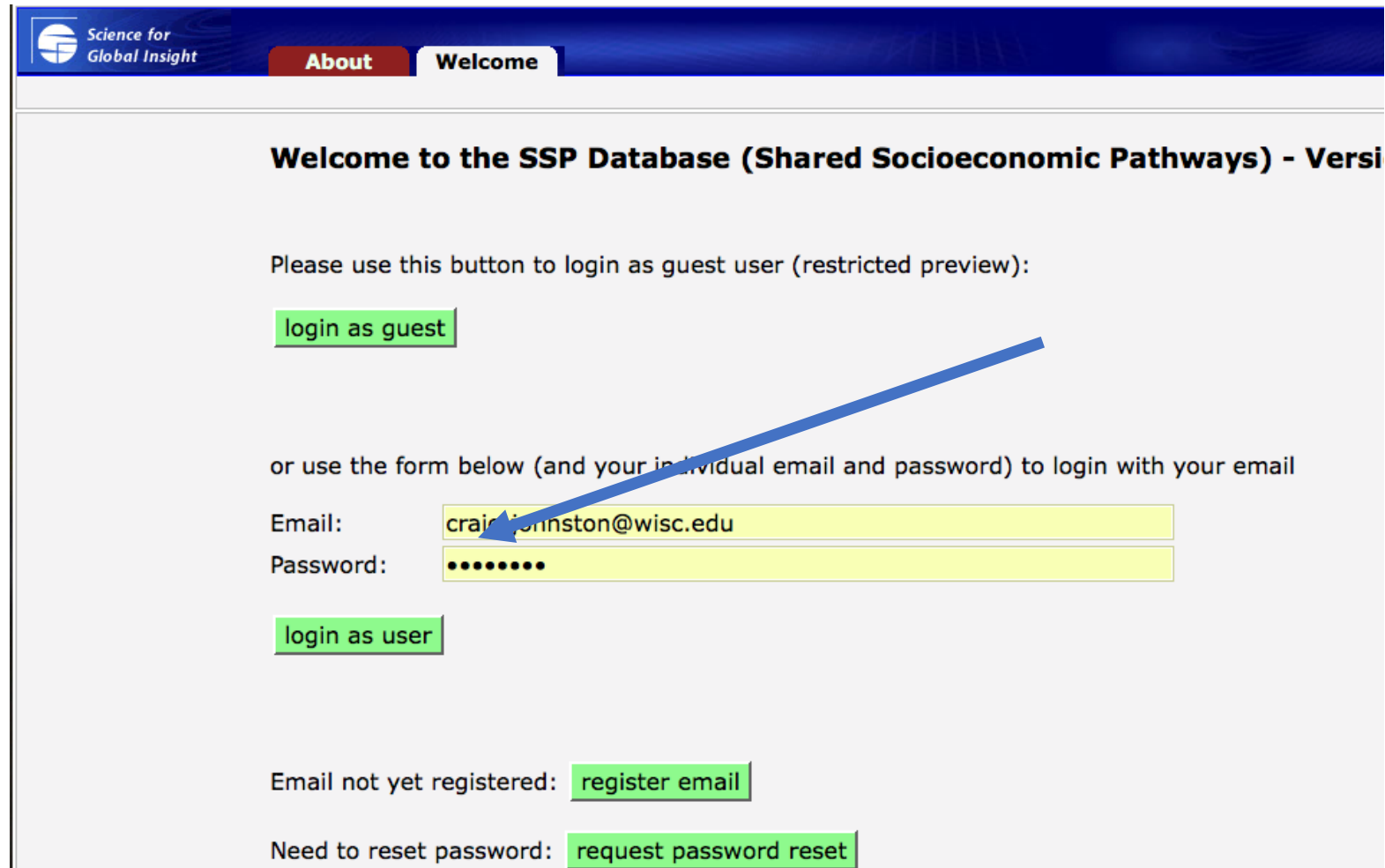
The SSP database aims at the documentation of quantitative projections of the so-called Shared Socioeconomic Pathways (SSPs) and related Integrated Assessment scenarios (for an overview see [Riahi et al, 2016](#)). The framework that the climate change research community has adopted to facilitate the integrated impacts, vulnerabilities, adaptation, and mitigation. Information about the scenario process and found in [Moss et al. \(2010\)](#), [van Vuuren et al. \(2014\)](#) and [O'Neil et al. \(2014\)](#) and [Kriegler et al. \(2014\)](#) built around a matrix that combines climate forcing on one axis (as represented by the Representative Concentration Pathways: [van Vuuren et al, 2011](#)) and socio-economic conditions on the other. Together, these scenarios provide a range of different pathways in which mitigation, adaptation and residual climate damage can be evaluated.

The SSP quantifications build upon the collaborative effort between the IAV and IAM community, through a series of meetings and identified a limited set of five SSP storylines/narratives ([O'Neill et al, 2012](#)). They serve as the starting point for internally consistent assumptions for the quantification of SSP elements. A range of different

WHERE CAN YOU ACCESS DATA?

Institute for Applied Systems Analysis (IIASA)

- Freely register yourself to access SSP & RCP projections



Science for
Global Insight

About Welcome

Welcome to the SSP Database (Shared Socioeconomic Pathways) - Versi

Please use this button to login as guest user (restricted preview):

[login as guest](#)

or use the form below (and your individual email and password) to login with your email

Email:

Password:

[login as user](#)

Email not yet registered: [register email](#)

Need to reset password: [request password reset](#)

WHERE CAN YOU ACCESS DATA?

Institute for Applied Systems Analysis (IIASA)

- Can click on countries for individual country level GDP, population, and urban share data
- Series for other aggregated series

Science for Global Insight

About Sectors Series Countries Scatter Download

Introduction

Disclaimer

Tutorial

Region definitions

SSP Database (Shared Socioeconomic Pathways) - Version

NEW RELEASE, October 2016: The SSP database was extended with new scenario **Model (IAM)** elaborations of the SSPs. The new scenarios provide detailed information and projections for the SSPs ([Riahi et al, 2016](#)). The scenario data complement earlier information on demographic elements of the SSPs posted in March 2013.

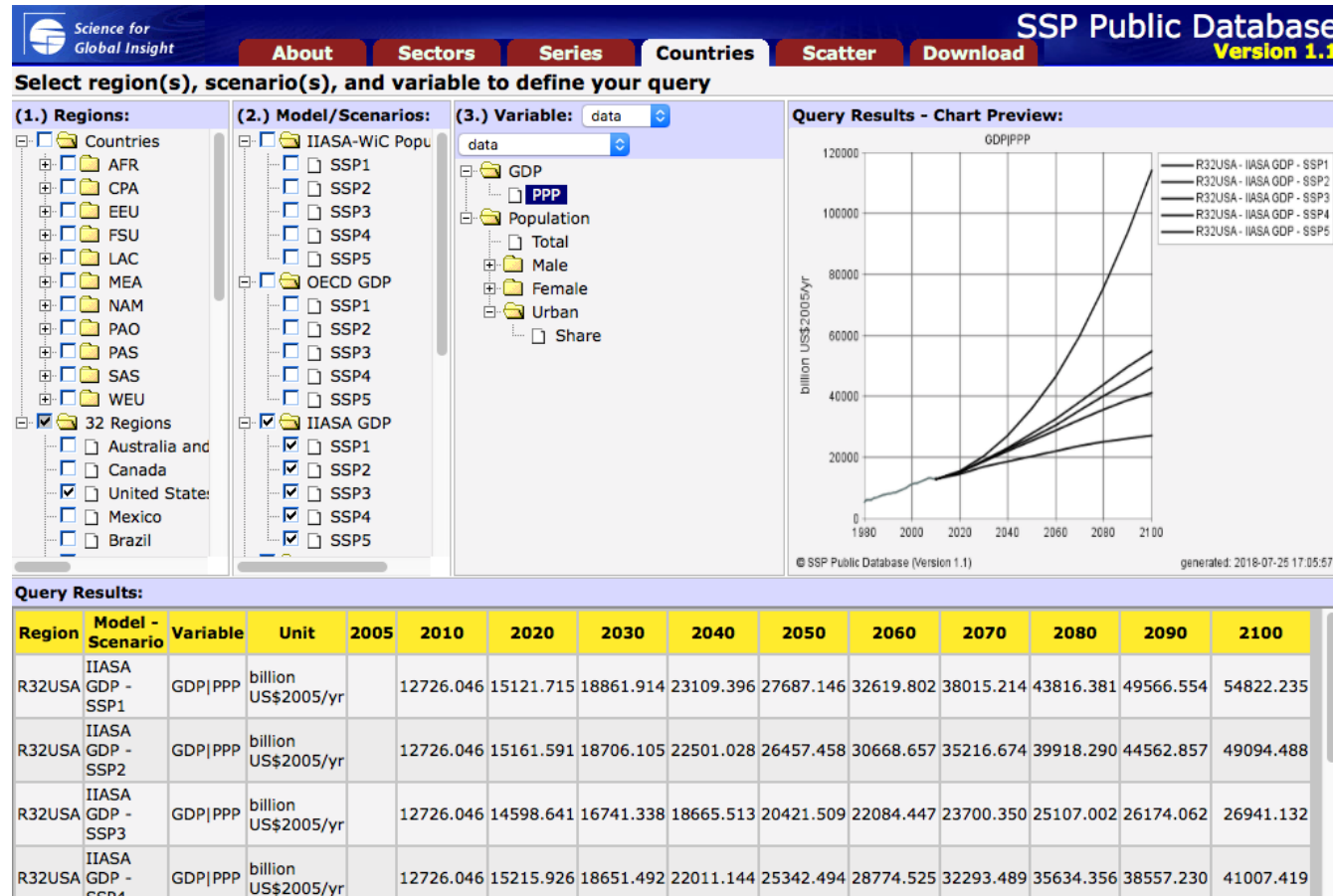
Introduction

The SSP database aims at the documentation of quantitative projections of the socio-economic conditions (SSPs) and related Integrated Assessment scenarios (for an overview see [Riahi et al. \(2016\)](#)) within a framework that the climate change research community has adopted to facilitate the assessment of the impacts, vulnerabilities, adaptation, and mitigation. Information about the scenario framework is found in [Moss et al. \(2010\)](#), [van Vuuren et al. \(2014\)](#) and [O'Neil et al. \(2014\)](#) and is built around a matrix that combines climate forcing on one axis (as represented by Shared Socioeconomic Pathways: [van Vuuren et al, 2011](#)) and socio-economic conditions on the other. Together, they provide a framework in which mitigation, adaptation and residual climate damage can be evaluated.

WHERE CAN YOU ACCESS DATA?

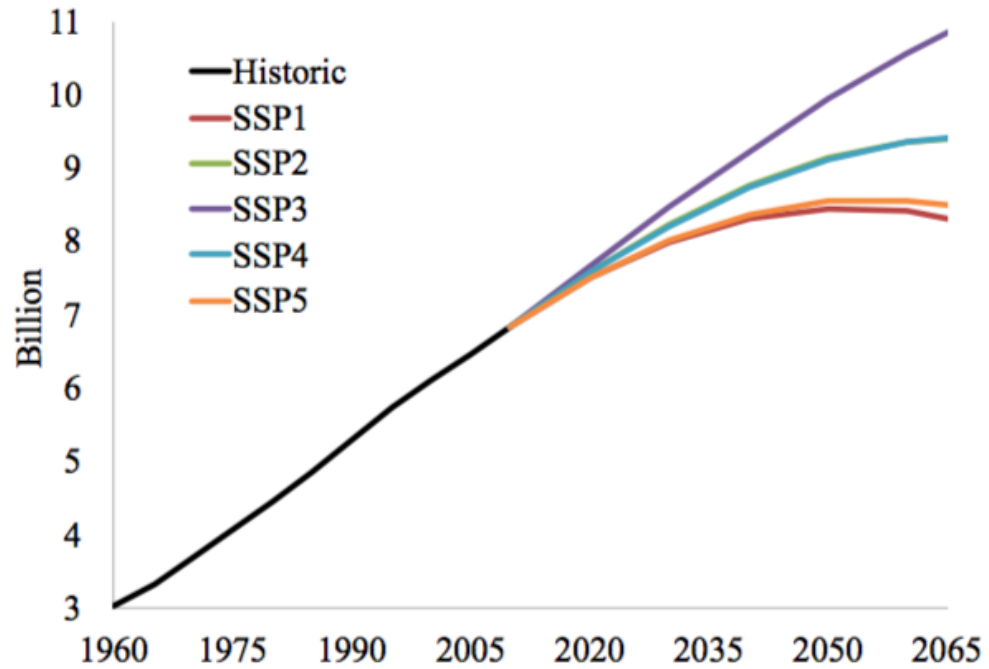
Institute for Applied Systems Analysis (IIASA)

- GDP across five SSPs for the United States



WHERE CAN YOU ACCESS DATA?

(a) Population



Source: IIASA (2017).

(a) GDP

