

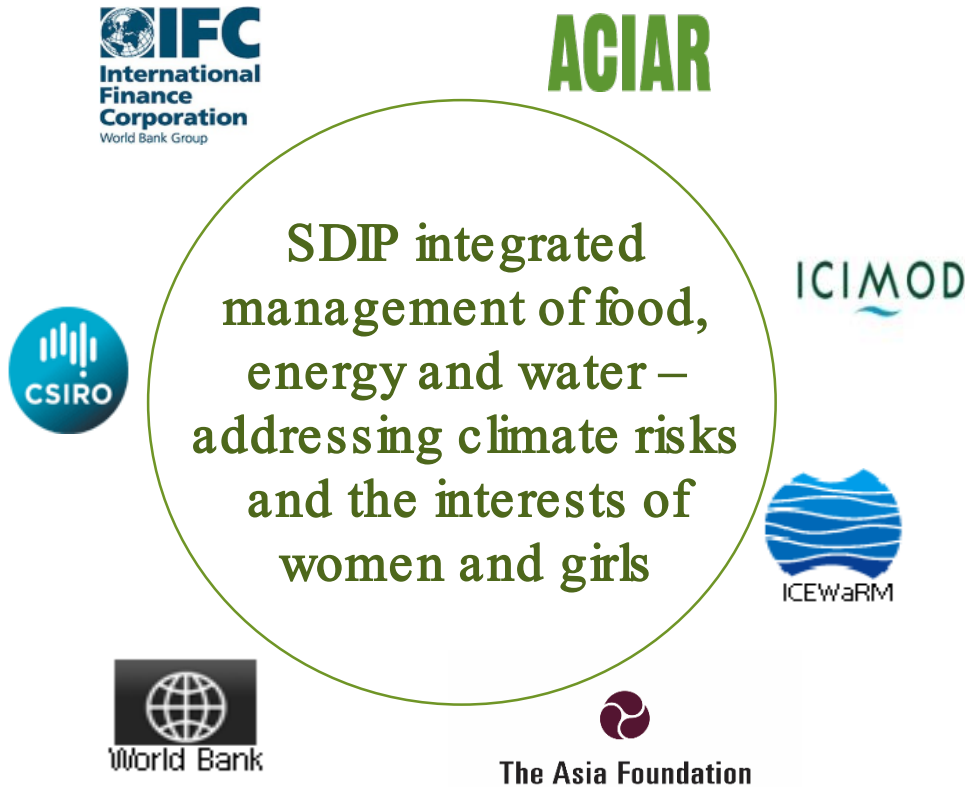
Institutional Innovation for Energy, Food and Water Security In South Asia

The Sustainable Development Investment Portfolio (SDIP)
Programme

Jim Woodhill
DFAT SDIP Advisor
Environmental Change Institute, Oxford University

Sustainable Development Investment Portfolio (SDIP)

Australia – partnering in South Asia for long term food, energy and water security



Outcome Areas

- Mechanisms/institutional capability for regional cooperation
- Knowledge to inform resource management decision making
- More effective enabling environment



The Food, Energy and Water Nexus



15% of fresh water used for Energy

Interlinkages

Up 28% to 2050

Demand



Water



THE GLOBAL GOALS
For Sustainable Development

Demand



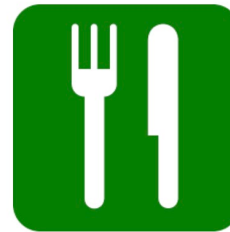
Energy

Up 38% to 2050

Interlinkages

70% of Fresh Water used for Agriculture

Food



Demand

Up 70% to 2050

Interlinkages

30% of Energy goes to food production and consumption

The Nexus Challenges for South Asia



Population – now 1.870b; 2050 2.24b

Poverty – 15%

Under \$3.10 – 50-60%

Urbanisation – now 35%; 2050 50%

Stunted Children – 37.5%

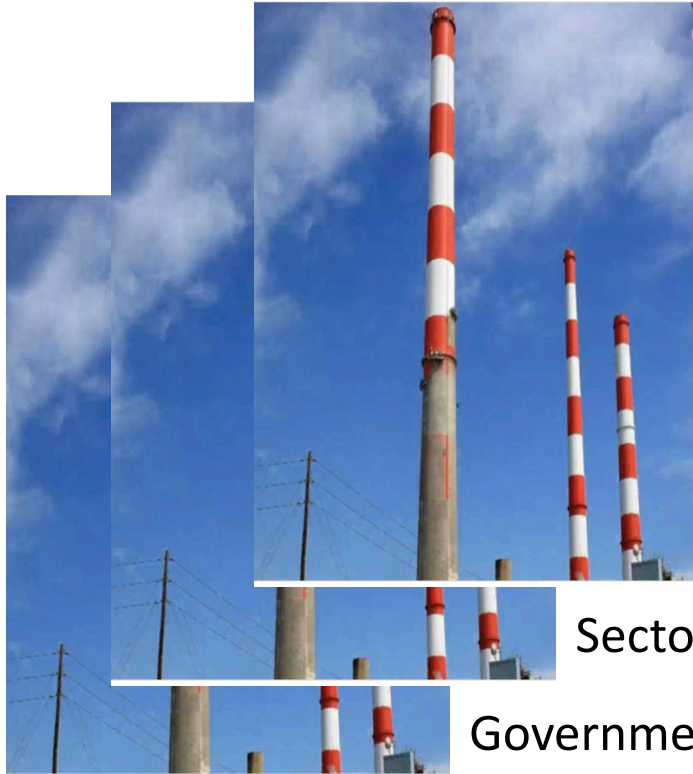
Over 90% of water used for agriculture

Climate change – 35-40% decline in crop yield; 10% more irrigation water used

Energy

- Massive growth in demand
- Critical to prosperity of the region and tackling poverty
- Energy choices will have long term impacts
- Significant agriculture/energy/water linkages
- Climate change impacts on and of energy

Institutional Constraints



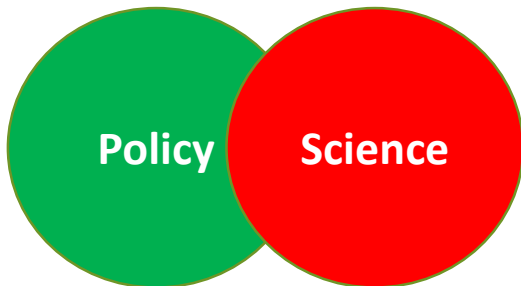
Policy Stove Pipes

Sector Stove Pipes

Government, Business,
Civil society Stove Pipes



Weak Mechanisms
for cross boarder
resource
management



Less than adequate
Science Policy Interface

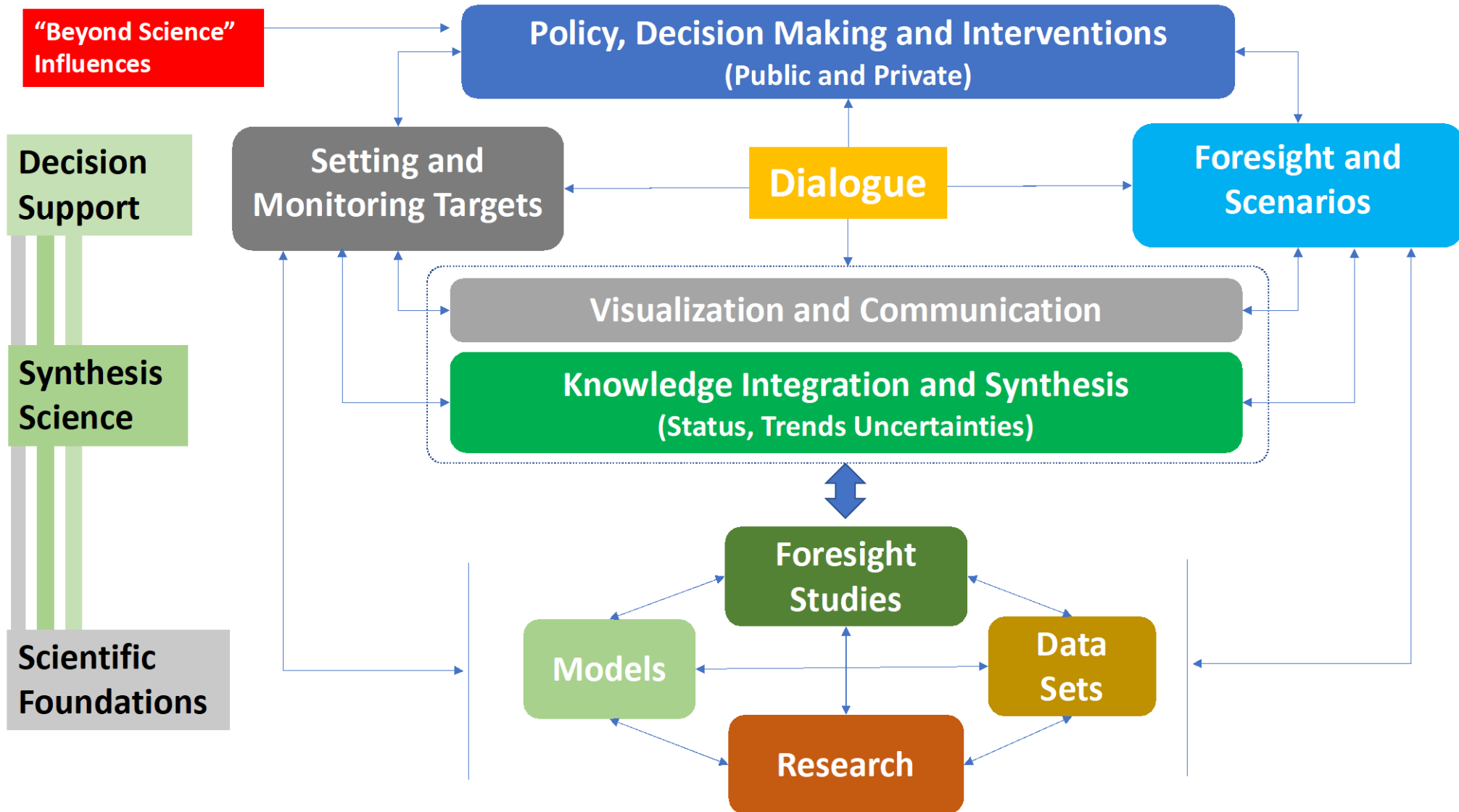


Limited Foresight and
Scenario Thinking

The SDIP Programme – Impact Examples

- Improved energy and water usage in Agriculture – reduced GHGs and increased yield - adoption of conservation agriculture across EGP
- More energy and water efficient industries – sugar industry in Nepal, garment manufacturing in Bangladesh
- Large scale solar energy in India reduction in water use from 5 to 0.03 ltr per kw/h relative to coal – and 18 million access to off grid small home appliances – reducing dependence on kerosene and biomass
- Co-developed the trial Indus River System Model (IRSM) – Water Apportionment Accord (WAA) tool that can support foresight and trade-off analysis
- Support for the Hindu Kush Himalaya Assessment - categorical assessment that 1.5 degree increase is too hot
- Development of food systems foresight and policy processes
- Spaces for dialogue- cross institutional and cross jurisdictional

Innovation Systems for Tackling the Nexus



**Systemic
Risks**



**Transformational
Opportunities**