



Greening the economy

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THE CONTEXT

The big meltdown

- ◆ Financial markets turmoil
- ◆ Economic contraction across the globe
- ◆ Greater climate change concerns

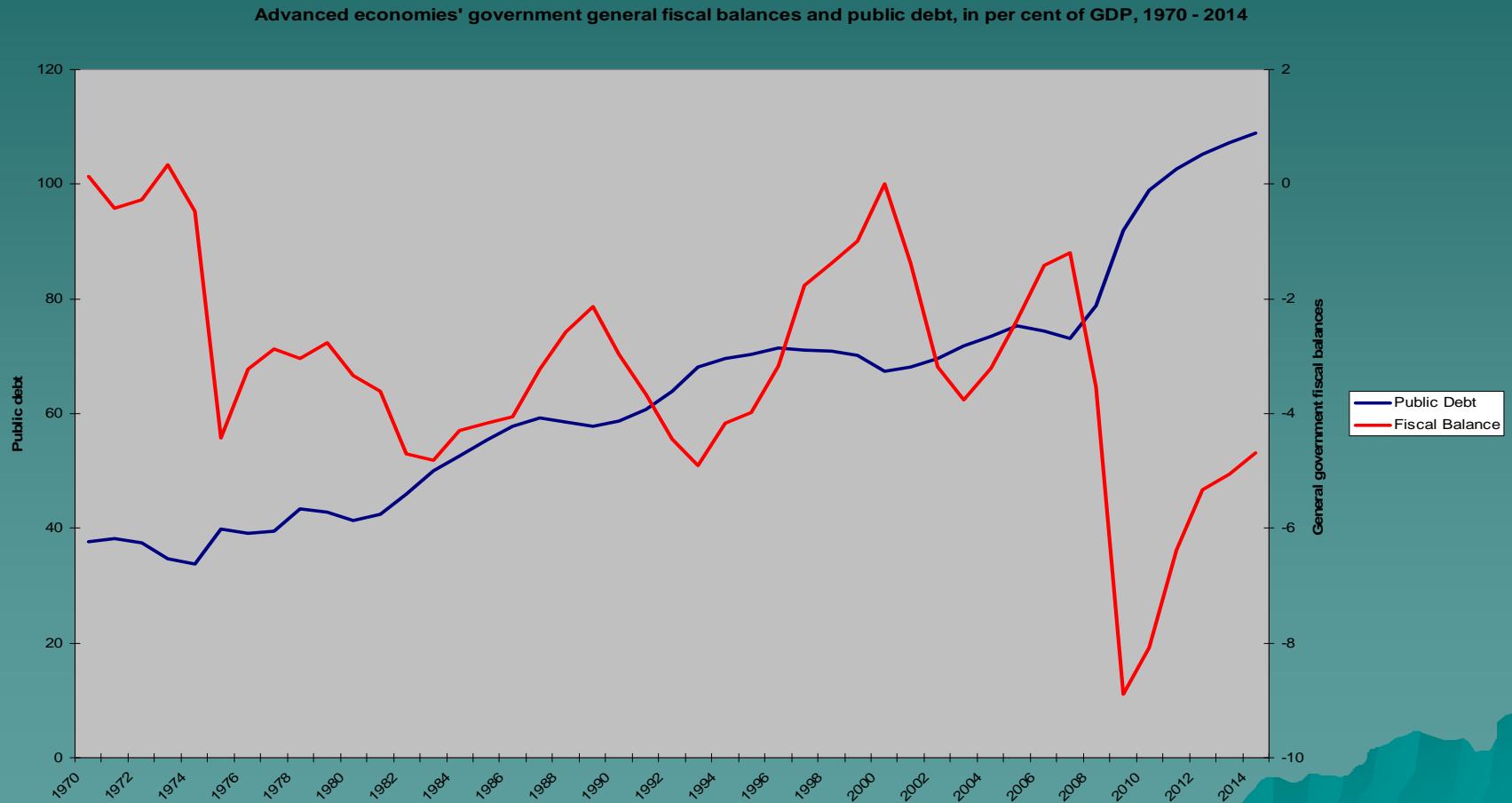


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Macroeconomic policy responses

- ◆ Huge public transfers to financial sector
- ◆ Unconventional measures to inject liquidity and sustain credit
- ◆ Massive Keynesian stimulus spending to boost aggregate demand
 - Estimated US\$ 3.1 trillion in economic stimulus packages

The Keynesian injection



The Global Green New Deal

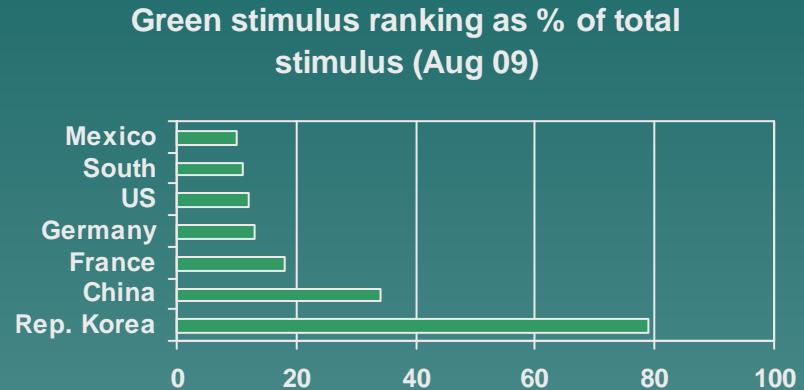
- ◆ The Global Green New Deal (GGND) to:
 - Reduce carbon dependency and ecosystem degradation
 - Revive world economy, promoting sustainable inclusive growth and achievement of MDGs
 - Create new jobs
- ◆ What are the elements of the Deal?
 - Five priority areas for investment
 - Six domestic policy reforms to support

The elements of the Deal

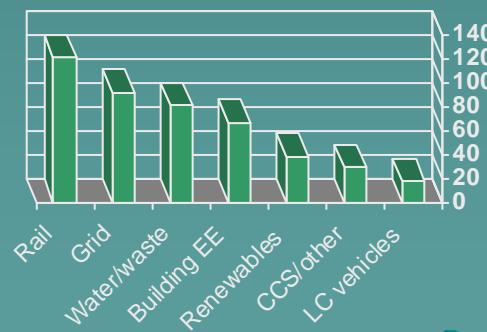
- ◆ Energy efficiency in buildings
- ◆ Renewable energy technologies
- ◆ Sustainable transport technologies
- ◆ Ecological infrastructure, including forests
- ◆ Sustainable agriculture, including organic production
- ◆ Supporting framework
 - No perverse subsidies
 - Positive incentives, including taxes
 - Improvement of land use and urban policy
 - Integrated freshwater resources management
 - Environmental legislation and enforcement
 - Monitoring and environmental accounting

Has the Deal been done?

- ◆ Approx. 15 per cent of global stimulus packages are green
- ◆ Large variation across the world
- ◆ Downside risks, esp. weak demand, may lead to need to maintain stimulus
- ◆ GGND vs. Greening the economy



G20 Green stimulus sectoral spending (US\$ bn)



**CONCEPTS
INITIATIVES**

Greening the economy

- ◆ Greening the economy = 'process of reconfiguring businesses and infrastructure to deliver better returns on natural, human and economic capital investments, while at the same time reducing greenhouse gas emissions, extracting and using less natural resources, creating less waste and reducing social disparities' - UNEP

UNEP Green Economy Initiative

- ◆ Its three components:
 - Green Economy Report
 - Green Jobs Report
 - The Economics of Ecosystems and Biodiversity
- ◆ Designed to assist governments in greening their economies through policy reform and sectoral investments
 - clean technologies, renewable energy, water services, green transportation, waste management, green buildings and sustainable agriculture and forests

Sustainable Development (SD)

- ◆ "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" - Brundtland Report, 1987

Basic elements of SD

- ◆ Three pillars: environment, economy and society
- ◆ Encourages conservation and preservation of natural resources and the environment, and management of energy, waste and transportation
- ◆ Based on sustainable patterns of production and consumption that do not degrade human or natural environment
- ◆ Equitable sharing of benefits of economic activity across society, to enhance well-being, protect health and alleviate poverty

Or Green Growth

- ◆ Green Growth: 'a policy focus for the Asia and Pacific region that emphasizes *environmentally sustainable economic progress* to foster *low-carbon, socially inclusive development*' – UNESCAP

Green growth paths

- ◆ Sustainable consumption and production
- ◆ Greening business and markets
- ◆ Sustainable infrastructure
- ◆ Green tax and budget reform
- ◆ Eco-efficiency indicators
- ◆ Investment in natural capital

How is greening the economy different from SD?

Sustainable development

- ◆ SD not spectacularly successful at inspiring change
- ◆ SD sounds stodgy and technocratic
- ◆ Natural capital underemphasized

Greening the economy

- ◆ Crisis context
- ◆ Evokes world of people and businesses
- ◆ Has natural capital at its core
- ◆ Less emphasis on health and waste

How is greening the economy different from SD?

- ◆ Understand connection between loss of ecological capital and poverty:
 - Loss of nature disproportionately affects the poor who depend on it for their livelihoods and employment
 - In India, unaccounted ecosystem services 7% GDP but 60% of poor GDP
- ◆ Natural capital therefore covers all three SD pillars

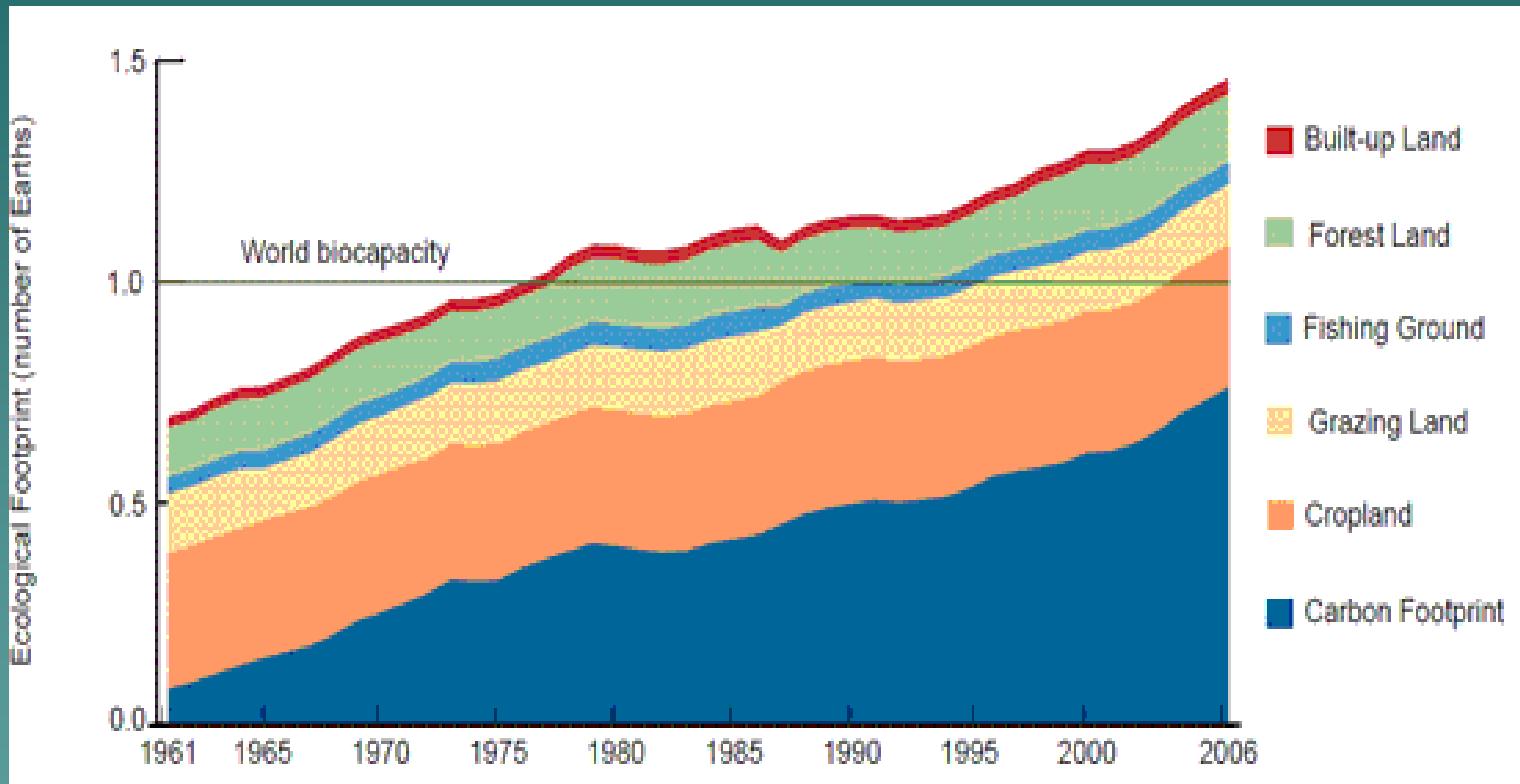
NATURAL CAPITAL



Natural capital

- ◆ “stock of natural ecosystems that yields a flow of valuable ecosystem goods or services into the future” - (Costanza, 2008)

Humanity is demanding 1.4 Earths!



...to generate resources it consumes and to absorb all CO₂ emissions

Clocking up ecological debt

- ◆ Growing gap between human demand on ecological services and rate at which nature can supply those services.
- ◆ Urgent threats we are facing today - climate change, biodiversity loss, shrinking forests, declining fisheries and freshwater stress - are symptoms of this trend

**How many planets we'd need if everyone
lived like a resident of the following:**

Balanced Budget	Global Deficit
USA 5 Planets	
UK 3.4	
Argentina 1.7	
South Africa 1.5	
China 1.0	
India 0.4	
World Average 1.4	

Credit: InfoGrafik.com

◆ “The future will be shaped by these resource limitations, so, it's clearly in the self-interest of every country to transition quickly from carbon and resource-intensive economies to the economies of the future” - Global Footprint Network President Mathis Wackernagel

Nature provides

- ◆ Nature provides climate stability, free flows of clean air and fresh water and biodiversity
 - Services like flood prevention and carbon sequestration are not paid for
- ◆ Humanity needs what nature provides, but how do we know how much we're using?

◆ 'Most of what nature provides us is free. It does not go through a market economy. That is why it tends to get ignored.' – Pavan Sukhdev

Inclusive concept of capital

- ◆ We must calculate the value of services we receive from nature
 - Valuation of biodiversity?
 - Cost of not having fresh water (of having to replace it with irrigation)
- ◆ Towards an inclusive concept of capital encompassing
 - Physical and human capital
 - BUT ALSO natural capital

Example

- ◆ Fuel tax in Costa Rica
- ◆ Proceeds are used to pay for environmental services
- ◆ Government pays for forest values:
 - Carbon
 - Water
 - Landscape
 - Biodiversity

**OTHER WORLDS ARE
POSSIBLE...**

Growth for prosperity ...

- ◆ economic development as a ladder of growth, 'with higher rungs representing steps up the path to economic well-being' – Jeffrey Sachs
- ◆ trickle down economics (Friedman, Reagan, Thatcher):
 - no need for active redistributive measures: prosperity will gradually 'trickle down' from spending of rich towards poor

... vs. Prosperity without growth

- ◆ 'Climate change is a symptom of a deeper malady, namely our fixation on unlimited growth of the economy as the solution to nearly all problems' - Prof. Herman Daly
- ◆ 'at some point we would have to think about whether we want future growth' – Lord Nicholas Stern

Measuring prosperity

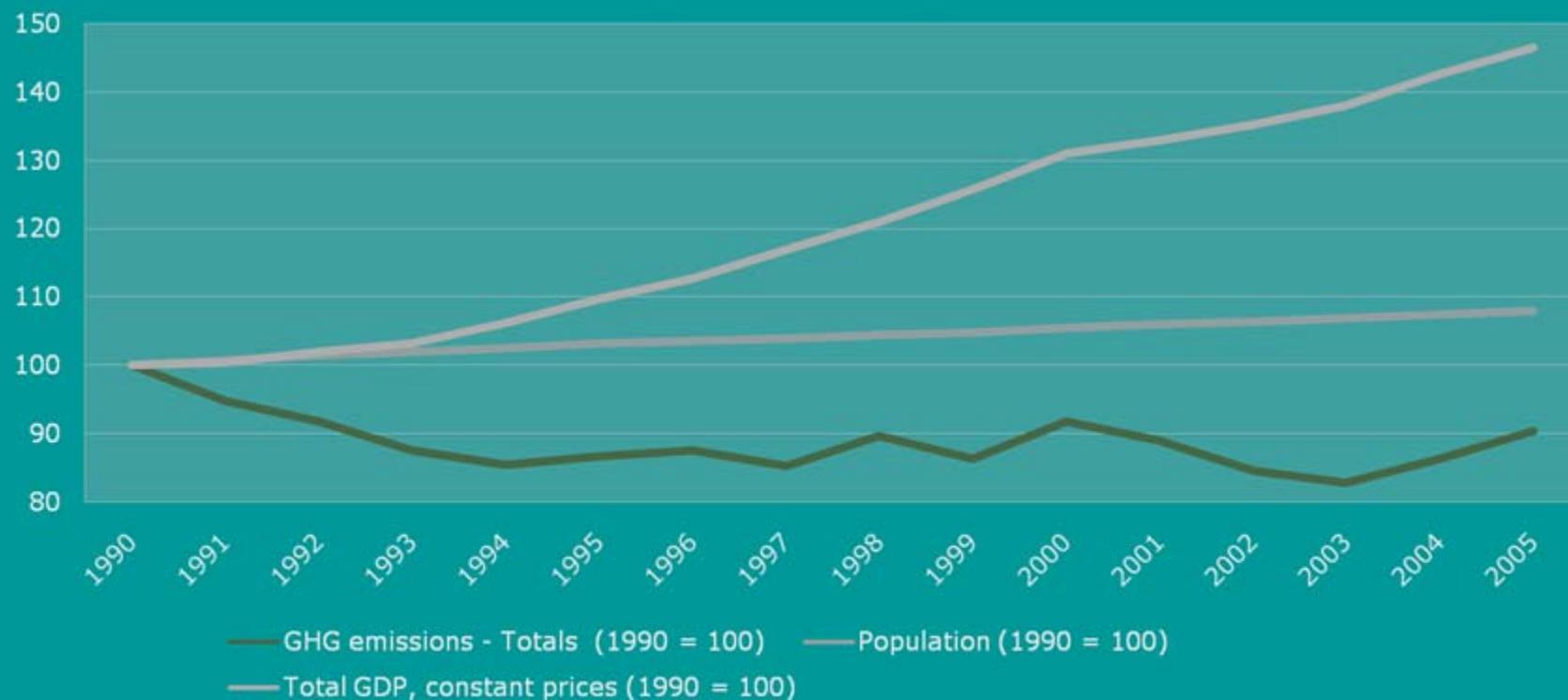
- ◆ Drop obsession with examining GDP and focus more on broader measures of prosperity
- ◆ 'a better measure of economic performance might show that steps taken to improve the environment are good for the economy' – J. Stiglitz

Sensitive demographics

- ◆ Does the rate at which people are reproducing need to be controlled to save the environment?

Decoupling growth from carbon?

**Trends in economic growth, population growth and GHG emissions in the UNECE region, 1990 - 2005
(1990 = 100)**



TOWARDS A GREEN ECONOMY



Basic elements of a green economy

- ◆ Reducing GHGs
- ◆ Using natural resources efficiently
- ◆ Enhancing natural, human and physical capital investments
- ◆ Engaging the private sector
- ◆ Producing less waste
- ◆ Reducing social disparities

Toolkit for a green economy

- ◆ Legislation / standard setting
- ◆ Fiscal policy reform
 - taxes / subsidies
- ◆ Green public procurement
- ◆ Trade policies and markets
- ◆ Information, awareness, education, and public participation
- ◆ Governance
 - Transparency, monitoring, and accountability
- ◆ Private sector and public-private partnership
 - Financing and investment
 - Technology
- ◆ Transitional measures

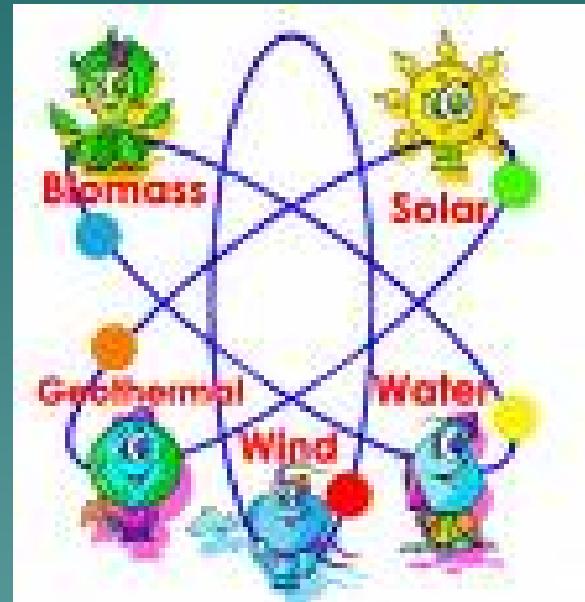
Examples: international

- ◆ Kyoto: Binding targets for emissions reductions 2008 - 2012
- ◆ Post-Kyoto:
www.climateactiontracker.org
- ◆ Carbon markets
- ◆ Phasing out of perverse non-renewable subsidies
- ◆ UNFCCC Art. 6 and Aarhus Convention



Examples: EU

- ◆ EU climate-energy legislative package 2009
 - 20% cut in GHG emissions by 2020
 - Renewables Directive
- ◆ Integrated Pollution Prevention and Control
- ◆ Directive to promote recycling



Examples: national

- ◆ Carbon taxes in Sweden, Finland, Denmark and France
- ◆ Green subsidies or tax breaks
 - Feed-in tariffs for renewable energy (Spain)
 - UK Committee on Climate Change: Government should 'strengthen ... investment climate for low-carbon power generation'
 - Make available financing for households to improve residential home energy efficiency
- ◆ Green public procurement
 - Buses / fleet cars with low emissions of particulates and Nitrogen Oxides
 - Purchase wood/wood products from legally harvested sources
 - Increase proportion of wood coming from sustainably managed forests
- ◆ Green infrastructure to support new sectoral technologies
- ◆ Raising awareness and changing habits

SHAPING POLICY UNDERSTANDING

Green Economy Report

- ◆ Will make macroeconomic case for increasing investment in 'green sectors'
- ◆ Objective to motivate and enable policymakers, business to invest in green sectors and to implement green policy reforms
- ◆ 'Sectoral' focus:
 - Agriculture
 - Cities and buildings
 - Energy
 - Fisheries
 - Forestry
 - Industry
 - Transport
 - Waste management and recycling
 - Water

Going forward

- ◆ Green economy is the future
- ◆ Deregulated markets cannot be relied upon to produce the needed investment in low-carbon technology
- ◆ Compelling option is mandatory investment in low-carbon technologies
- ◆ Apart from emissions caps, the current state of the carbon market will not lead to a green economy
- ◆ Changing consumer attitudes also part of the solution