



# **Toward a Just Transition in Coal**

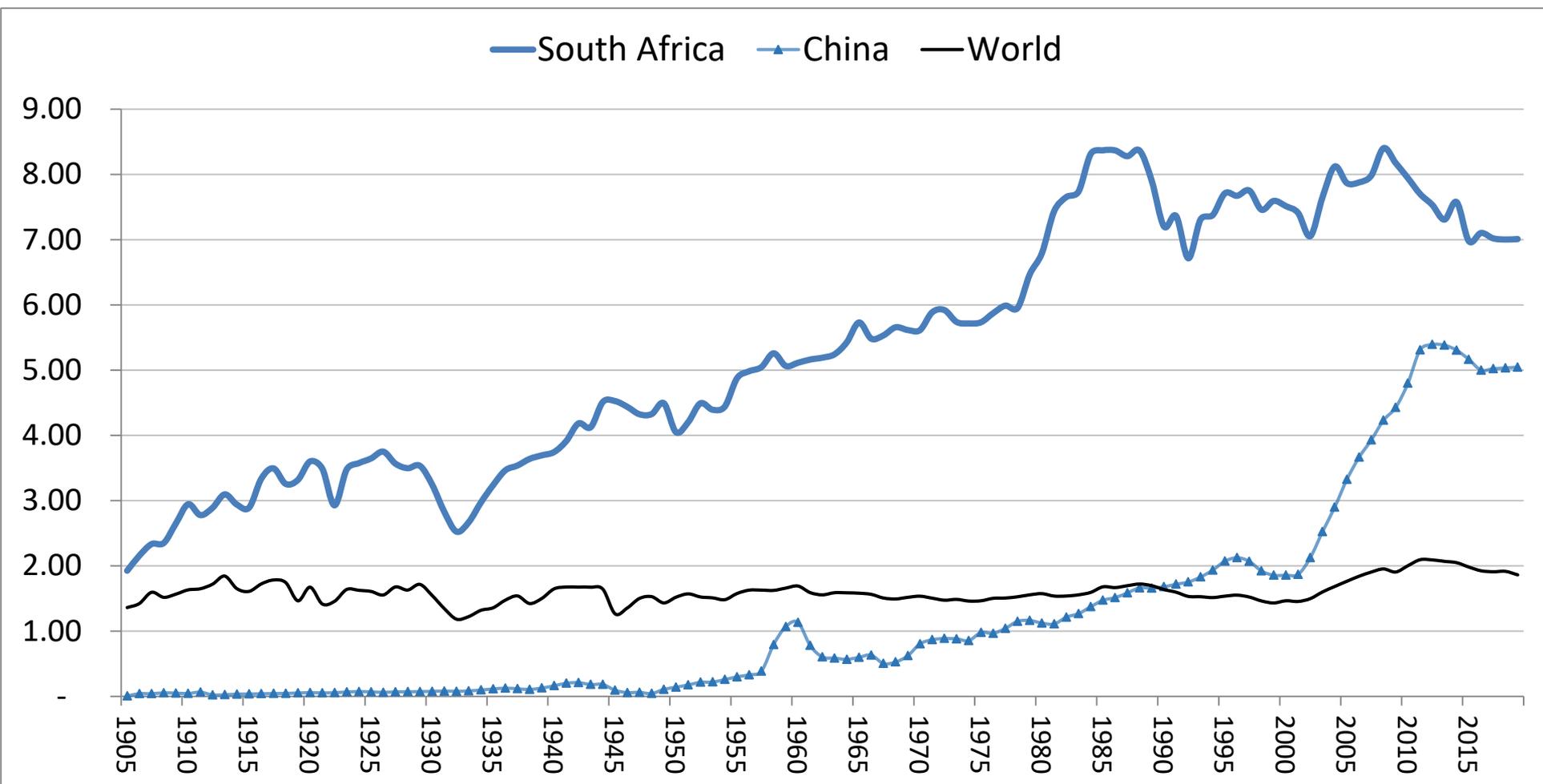
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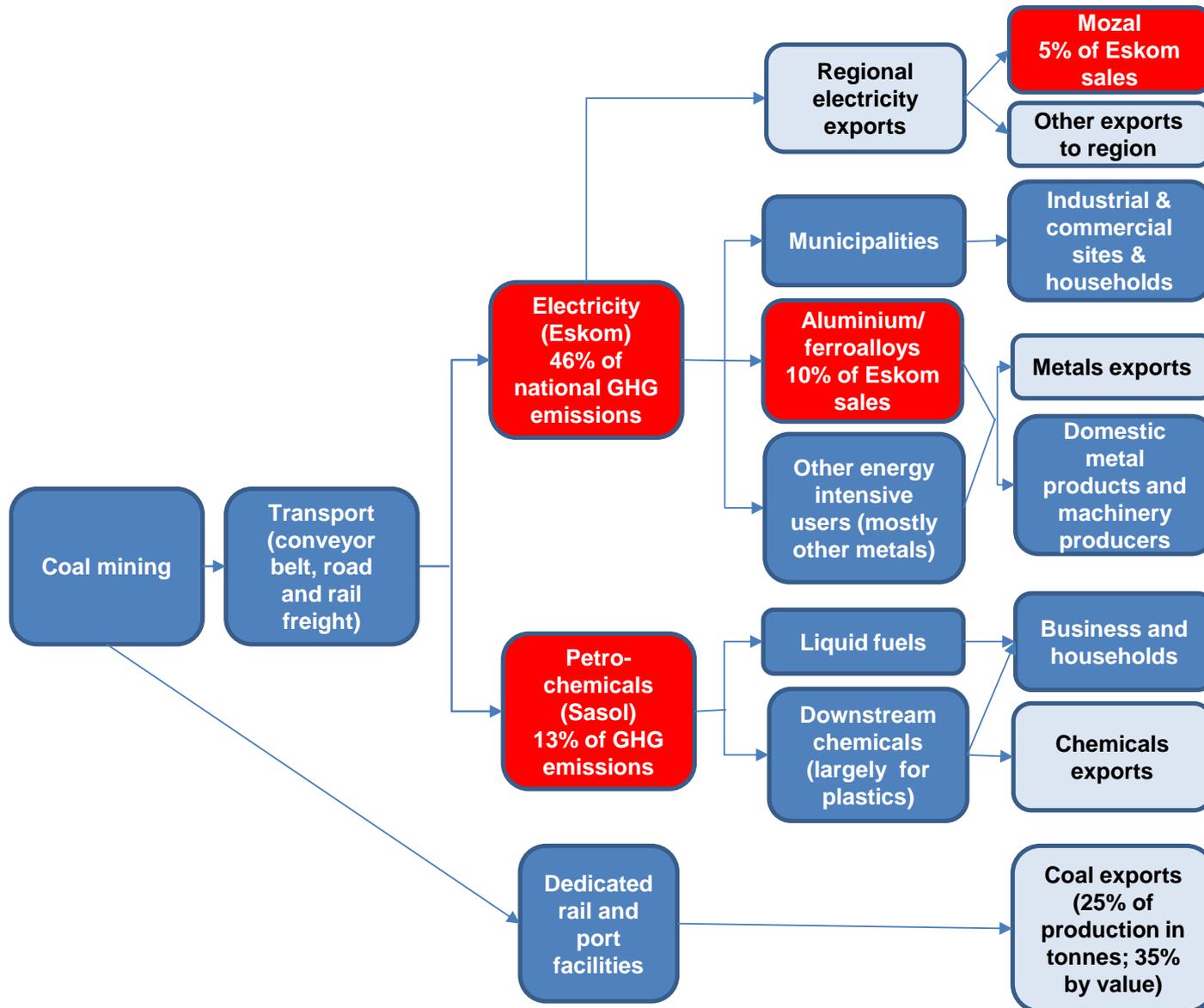
# Problem statement

- Shift to new energy sources is inevitable over coming 20 years because:
  - SA has unusually high emissions due to its reliance on coal for electricity and some petrochemicals
  - Coal-based electricity technologies are no longer competitive on generation costs
- The transition offers new opportunities as well as costs for economic stakeholders (“creative destruction”)
  - Should stabilise and reduce the cost of electricity generation and maintain avenues for exports, benefiting most economic stakeholders and citizens
  - But costs of the transition will fall mostly on coal value chain itself.
    - Companies will have to write off coal reserves and capital investments
    - Mining jobs will disappear
    - Coal districts in Mpumalanga will have to develop alternative economic activities
  - Additional costs
    - New transmission systems
    - New ways to stabilise the grid
- Different groups in the coal value chain vary substantially in their ability to manage the transition, with workers and communities most vulnerable
- Policy brief therefore
  - Reviews emissions from the coal VC in SA
  - Analyses blockages to the transition in terms of (a) its benefits and costs to different stakeholders (mostly from the SJRP) and (b) the governance system for the VC
  - Lays out possible phasing
  - Identifies key decisions and debates arising in the process

# Coal-based CO<sub>2</sub> emissions per person in South Africa, China and the world in tonnes, 1905 to 2019



# The coal VC and emissions



# Cost bearers

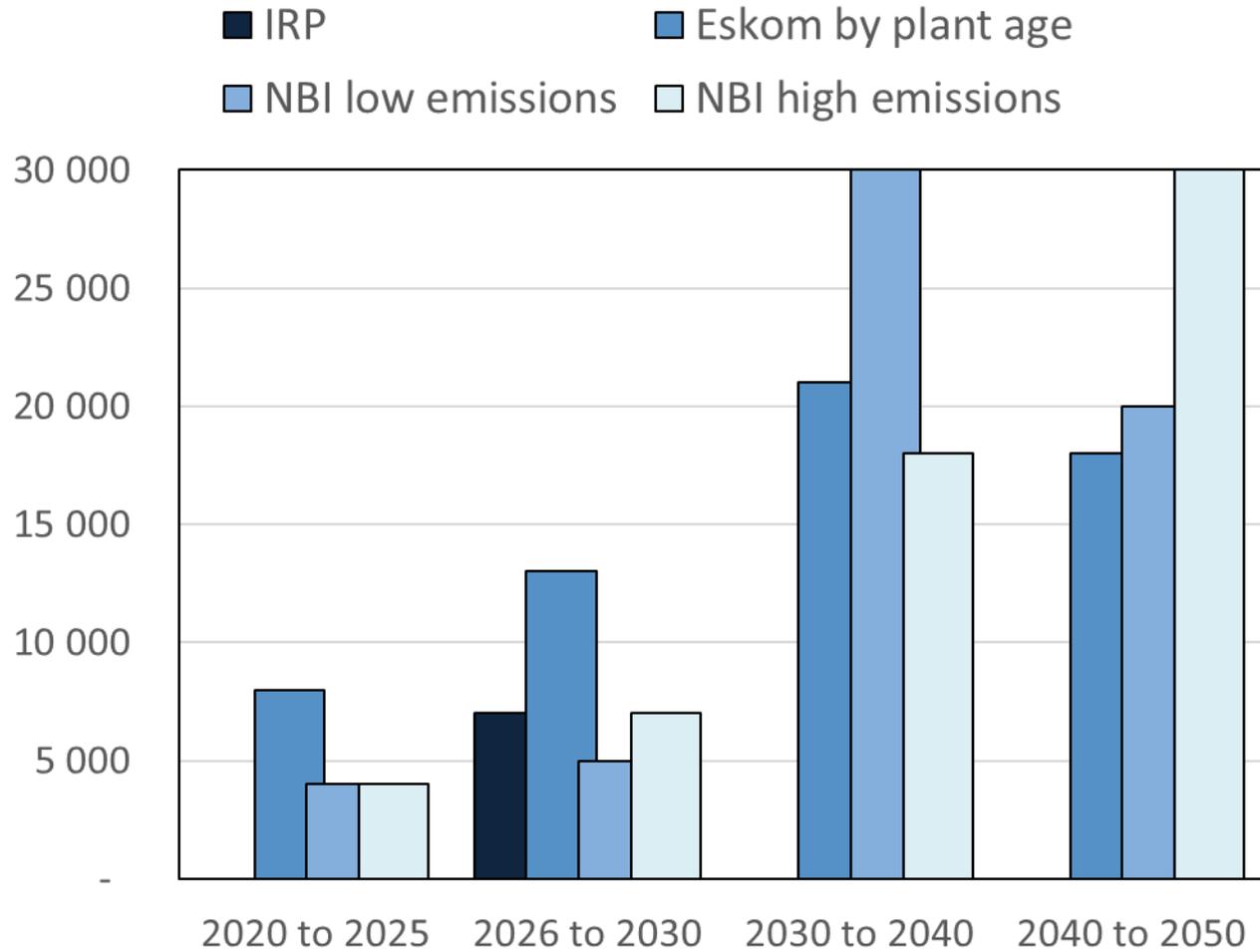
- Workers:
    - Mines: 90,000
    - Eskom: 47,000
    - Sasol: 25,000
    - Base metal refineries: 47,000 (down from over 70,000 in 2008)
  - ***Main job losses likely in mining, as others can shift to other energy sources***
  - Most workers in VC have only matric or less, but
    - Above median pay especially in mining
    - Benefits and job security
    - Organised
  - Only 20% women (and less in coal mining), compared to 40% in other formal jobs
  - 20% over 50
- In four Mpumalanga towns, coal value chain contributed
    - around half of local economy (Quantec)
    - over a quarter of formal employment
  - The towns contribute
    - 4% of national GDP
    - 2% of population,
    - 25% of coal VC – and much higher share of mining and electricity
  - Average household income 25% above national average (was 35% higher in 2000; biggest fall in Emalahleni)
  - Share of working-aged population with formal employment in 2019:
    - Coal towns: 37%
    - Rest of SA: 32%

# Governance

- Regulation of the coal VC initially emerged to promote coal use
- Systems include:
  - public subsidies to Eskom
  - licencing, tax and pricing regimes that favour mining and coal-based electricity and liquid fuels
  - the provision of roads, dedicated freight rail and port facilities for coal transport
- Hard to re-engineer because governance fragmented
  - DMRE manages overall policy – Ministerial determination limits Eskom investment in renewables and IRP includes new coal
  - DFFE – Mandates to set targets for emissions, but limited authority over electricity and coal policy
  - dtic – investment promotion does not require consideration of emissions, leading to support for Musina Makhado plant and support for BEE investment along value chain
  - NT – taxes and levies on emissions are not evaluated against emissions targets
  - Nersa – required to set electricity price to provide reasonable rate of return without internalising emissions costs
  - IDC, GEPF and PIC – heavy investments in coal VC to support new black entrepreneurs (IDC has large holdings in Mozal and Hulammin, Sasol and Exxaro)
  - Municipalities – very limited mandates and capacity for economic diversification

# Phasing

- Phasing is critical for JT strategies
- But remains highly uncertain
- Mines and plants always aging out – but now replaced by different technologies
- Rough estimates of coal mining job losses just from lower use to generate electricity:
  - around 5000 through 2025
  - 7000 from 2025 to 2030
  - 20 000 to 30 000 in 2030s
  - Similar in 2040s
- Additional losses depend on Sasol and exports
  - New Sasol targets will affect its coal mines



# Pillars of the just transition

- Diversification in coal districts
  - Need to generate new livelihoods
  - Centred on
    - New, sustainable clusters and activities
    - New kinds of production and ownership (small business, township economies, collective and social enterprise)
  - Instruments: Facilitating information flows, evaluation of opportunities, infrastructure, licencing, financing, tax incentives, skills development
  - Link into national and global value chains as well as meeting local demand
  - Build on strengths – region has long-standing capacity for manufacturing, agriculture and tourism
  - Start before downsizing to address underlying challenges – education, new economic opportunities, infrastructure (industrial and township sites, logistics, broadband)
- Active labour market policies
  - Assist workers to transition to new employment
  - Centred on information about opportunities, skills development, resources for new businesses
  - But experience shows will only work where overall employment is growing
  - How to prioritise employed compared to other oppressed groups?
- Social protection
  - Support affected workers and small business owners and their communities during transition
  - Centred on: Extended unemployment support, early retirement, social grants
  - Again: How to prioritise displaced workers and small businesses compared to entirely destitute?

# Planning methodology

- Work backward from impact and outcome targets to outputs and activities (TOC terminology)
- Requires flexible and responsive implementation
- Based on continual monitoring and evaluation with
  - Requirement that respond when not getting to targets
  - Faster dispute settlement within the state

# Steps in the just transition

## Step 1: Agreement on JT

- Government and economic stakeholders agree on a just transition
- Key decisions:
  - Musina Makhado and IRP coal
  - How Sasol gets to net zero
  - alternative energy sources
  - sustainable grid and electricity market through transition
  - phase out support for coal exports
  - Jump-start investment in economic capacity in coal towns (education, infrastructure)
- Blockages and risks:
  - fragmented governance
  - unclear prioritisation

## Step 2: Timeframes, strategies, responsibilities

- Requirements:
  - Targets for energy transition (phases for downsizing in coal) and affected working people and communities (income and asset ownership, education, community mobilisation)
  - Strategies to reach them
  - Mandates
  - Monitoring systems
- Key decisions:
  - Terminate new coal plants and agree targets for Sasol and metals refineries
  - How to prioritise coal workers and communities in terms of capacity and resourcing
  - Clarity around mandates and structures for state agencies, with monitoring, greater transparency, accountability and consultation, and effective dispute settlement
- Blockages and risks:
  - Continued disagreement within state and key economic stakeholders on timing and allocation of costs
  - JT not included in KPIs for relevant agencies

# Steps in the just transition (cont.)

## Step 3: Develop and test proposals

- Learning phase
  - Analyse and initiate key programmes and strategies
  - Evaluate in terms of potential to reach the requisite scale
- Decisions:
  - Quality of livelihoods
  - Managing the risks of innovation without paralysis
  - How to reaching individual workers and small businesses
  - Role of Social and Labour Plans
- Blockages and risks:
  - Slow national growth
  - Lack of capacity especially at local level
  - Poor risk management and monitoring systems
  - State unclear on stakeholder roles
  - Community exclusion leads to resistance

## Step 4: Full implementation

- State agencies and private actors implement projects and strategies
- Decisions:
  - Commitment of resources and capacity
  - Prioritisation within state
- Blockages and risks:
  - Inadequate stakeholder support
  - Lack of government alignment
  - Community alienation and resistance
  - Weak planning and risk management capacity
  - Broader economic conditions and destabilised electricity system

## Step 5: Success!

- Impact and outcome targets met
- Coal towns emerge as vibrant economic and social centres with strong middle class

# Conclusions

- Huge benefits from transition away from coal – but come with significant costs for stakeholders in the value chain starting in a few years
- Managing costs requires collective action to develop new livelihoods for affected working people and their communities while strengthening participatory democracy and social solidarity.
- Programmes centre on effective economic diversification, while supporting working people through innovative active labour market measures and social protection.
- Preconditions for success centre on
  - more consistent decision-making systems and mandates for public agencies around both the transition from coal and mitigating the impacts on workers and communities;
  - adequate resourcing, prioritisation and technical skills;
  - strong monitoring and risk-management systems;
  - transformation in state systems to promote collective action and participatory democracy



**Re a leboha!**