

Implementation path of carbon emission reduction in water industry under the background of "double carbon"

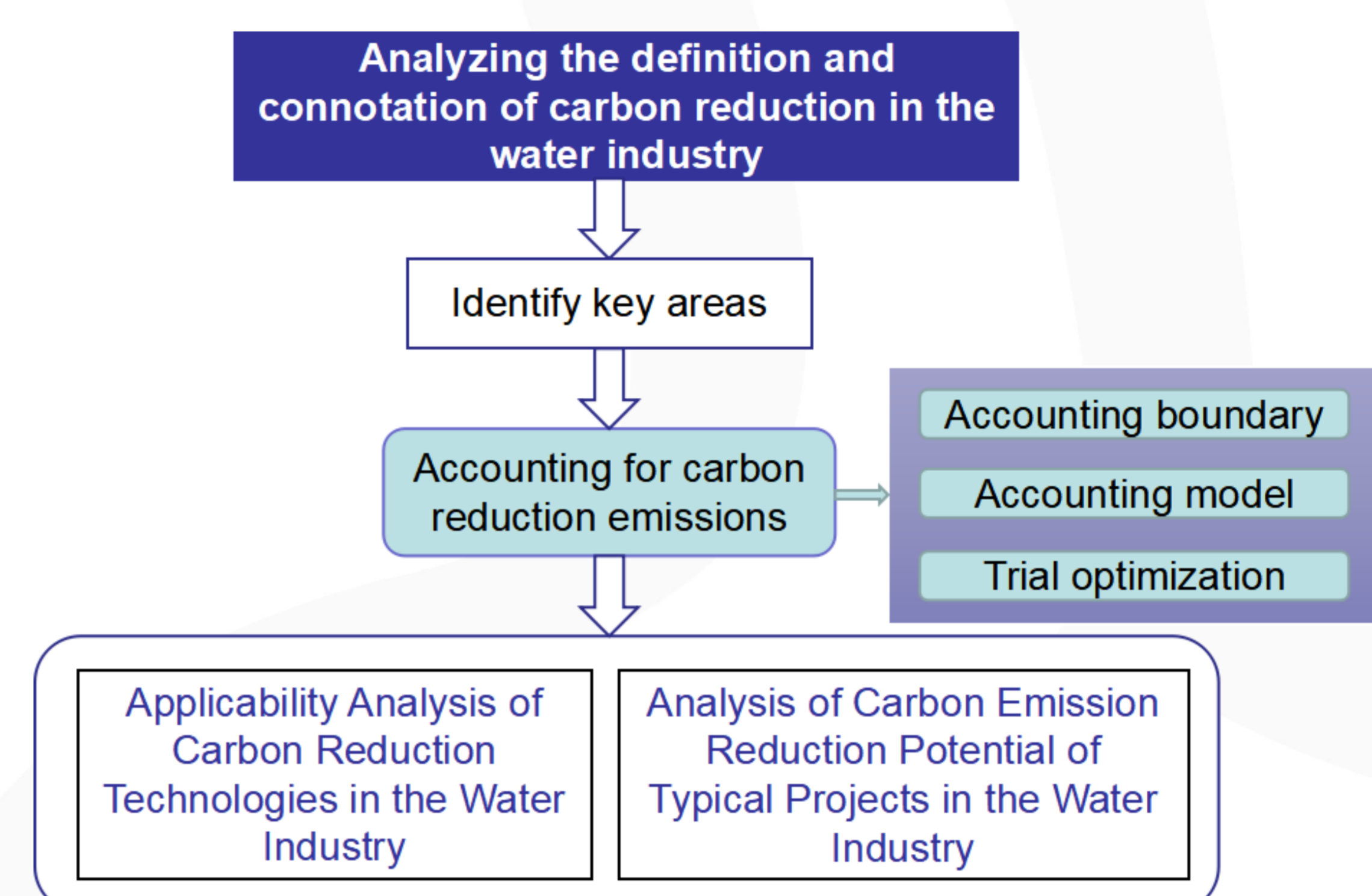
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Objectives

Climate change is a major global challenge facing humanity today. With the rapid development of the economy, uncontrolled energy consumption and excessive carbon emissions can lead to greenhouse gas pollution and global climate change. The water industry is a fundamental industry for the development of the national economy, and is duty-bound in the process of achieving carbon peak and carbon neutrality. Carry out carbon emission accounting for the Beijing water industry and explore the potential for carbon emission reduction of typical units of different scales and regions, providing technical support for the Beijing water industry to achieve the goal of continuous reduction in carbon emissions.

Methods

Identify key areas and links of carbon emissions in the water industry, clarify accounting methods for these areas, and carry out carbon emission monitoring and emission reduction assessment for typical units in the supply, sewage, and water conservancy engineering industries.



Conclusions

In the process of comprehensively promoting the high-quality development of water management in the capital, we will benchmark the "dual carbon" goal and propose countermeasures and implementation paths for reducing carbon emissions and increasing carbon sinks in the water industry.

- Promote low-carbon treatment in the field of sewage treatment and tap the potential for clean energy substitution; Increase the research, application and promotion of new technologies such as sewage anaerobic Ammoxidation to achieve technical carbon reduction; Expand the scope of recycled water use, expand the reuse of sludge resources, explore intelligent control of sewage treatment, and comprehensively improve the efficiency and efficiency of sewage treatment.
- The field of tap water production and supply focuses on improving efficiency and carbon reduction, improving equipment operation efficiency, making full use of renewable energy equipment for cooling and heating in the plant area, reducing energy consumption, increasing water-saving control, and reducing water demand from the source by strengthening water metering, reducing pipe network leakage, stepped water prices, water conservation, Source water protection and other measures, so as to reduce the pressure on production and supply to achieve emission reduction.
- Promote the improvement of energy efficiency in water conservancy projects, implement the replacement of old equipment, promote the application of water source heat pumps or air source heat pumps, and promote the intelligent transformation of water conservancy project scheduling, operation, and maintenance in conjunction with smart water services.

In order to achieve the coordinated implementation of carbon peak and carbon neutrality work in the capital and high-quality development of water industry, and to achieve the carbon neutrality goal within the water industry, it is necessary to focus on analyzing the key emission links of the water system, seize the factors affecting carbon emissions throughout the entire process, deeply tap the potential for carbon reduction, and effectively plan a combination of control measures to reduce carbon emissions through efficiency reduction, technology reduction, management reduction, and increasing carbon sinks.