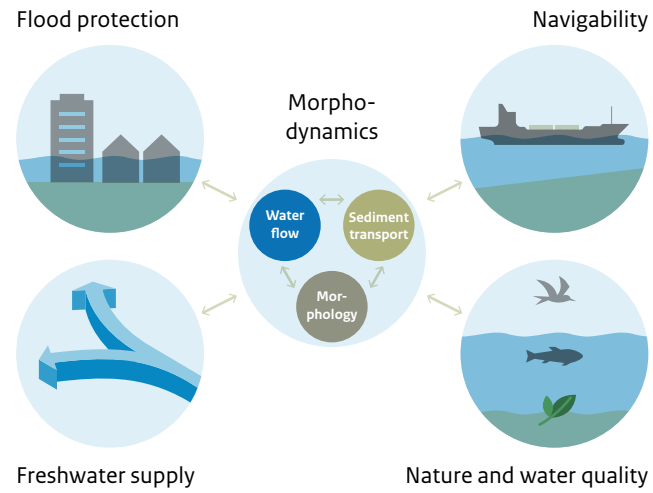


Rivers2Morrow

Questions from policy and management, and research focus



Bedform dynamics and their impact on flood safety and navigability

Policy and management: To what extent can bedforms increase the water level at high discharges and hinder shipping at low discharges?

Research focus: Insight into the development of bed forms with increasing discharge, their effect on bed roughness, and the rate at which they flatten again when the water level drops.

Improved quantification sediment transport lowland rivers

Policy and management: To what extent is our current policy sustainable if the sediment supply changes due to climate change and human intervention?

Research focus: The best possible quantification of sediment transport by combining both different measuring techniques and smart methods for data processing.

River bed dynamics of the upper reaches of the Rhine

← Mouth river bed 1950 river bed 2018 Source →

Policy and management: What is the desirable river bed elevation, in view of the different river functions, and how can it be achieved?

Research focus: Insight into the river bed development, in response to interventions in the past, and to sea level rise and changing discharge regimes in the future.

River bed dynamics of the lower reaches of the Rhine and Meuse

clay sand

Policy and management: What are the best measures to ensure a stable river bed for the entire area and to combat local erosion?

Research focus: Incorporating knowledge on the behavior of mixtures of sand and silt into formulas and models to explore the dynamics of the river bed now and in the future.

Hydrodynamics and sediment transport at river bifurcations

Policy and management: Which river management fits in with possible future changes in the distribution of water and sediment over the Rhine branches?

Research focus: Insight into the distribution of water and sediment at the Rhine bifurcations, and how human actions, sea level rise and a changing discharge regime influence this.

The supply and origin of fine sediments from the catchment area of the Rhine

Policy and management: How do water quality of Rhine and Meuse, and dredging volumes in their lower reaches change?

Research focus: Why has the fine sediments concentration in the Rhine water decreased in recent years and what will be the trend for the future?

The budget of sand and silt in the lower reaches of the Rhine and Meuse

salt water freshwater

Policy and management: What are the possibilities for long term sediment management in the lower reaches of the Rhine and Meuse that safeguard navigation, ecology, bed stability and flood safety?

Research focus: Insight into the amount of sediment present in the lower branches, from the rivers and the sea and controlled by dredging and dumping, and how the sediment budget has developed through time and will develop in the future.

The modeling of the long-term behavior of lowland rivers

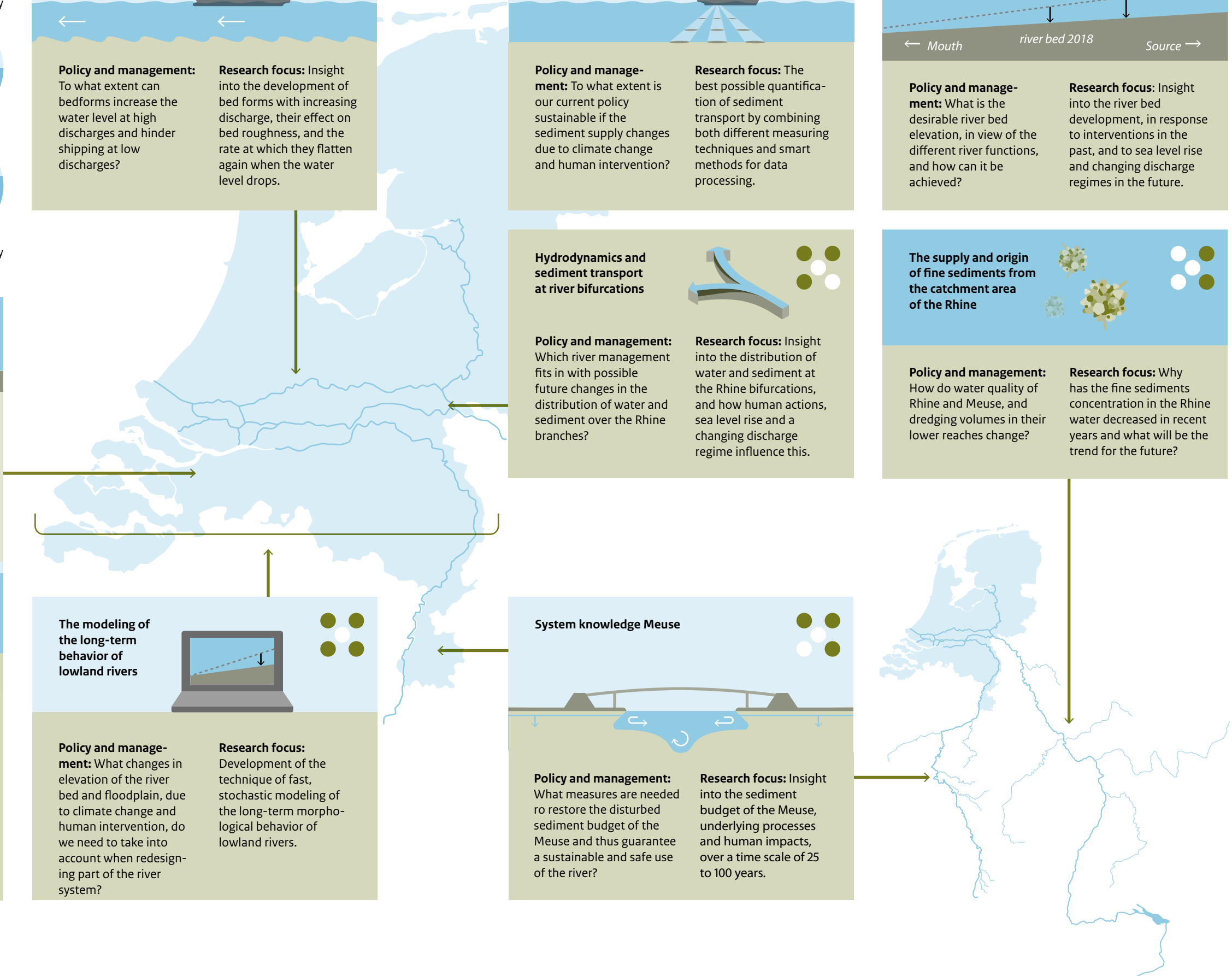
Policy and management: What changes in elevation of the river bed and floodplain, due to climate change and human intervention, do we need to take into account when redesigning part of the river system?

Research focus: Development of the technique of fast, stochastic modeling of the long-term morphological behavior of lowland rivers.

System knowledge Meuse

Policy and management: What measures are needed to restore the disturbed sediment budget of the Meuse and thus guarantee a sustainable and safe use of the river?

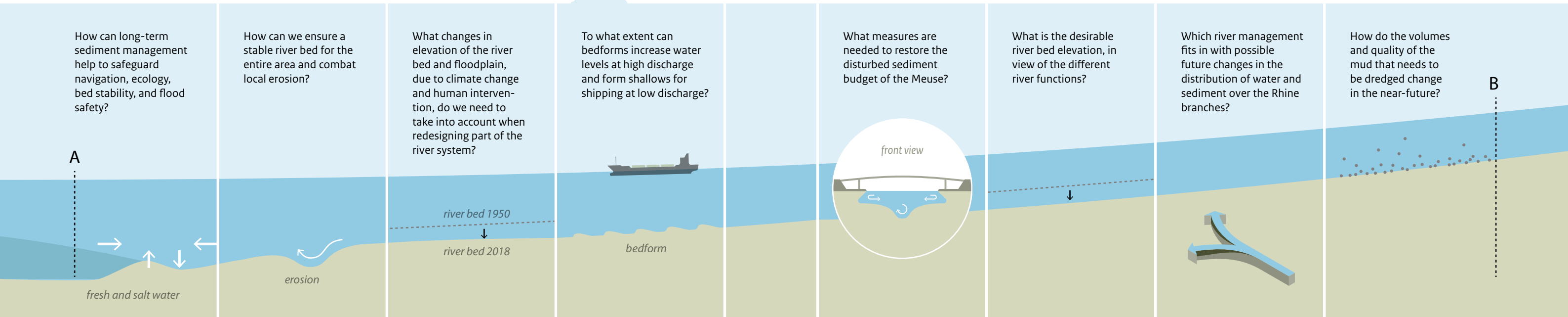
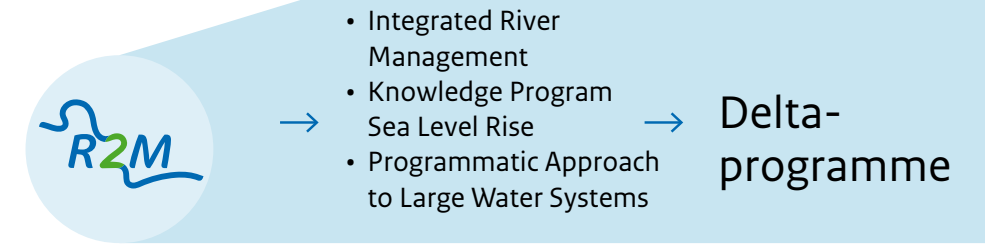
Research focus: Insight into the sediment budget of the Meuse, underlying processes and human impacts, over a time scale of 25 to 100 years.



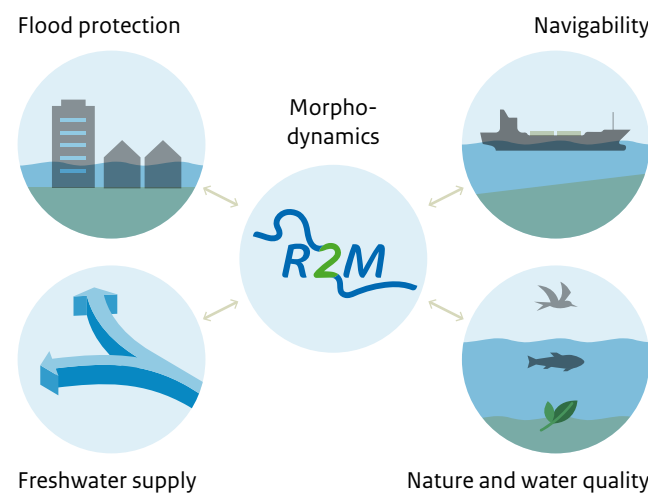


Rivers2Morrow aims to contribute to answers to these policy questions:

The studies contribute to the following programmes:



Policy themes Rivers2Morrow focuses on:



Policy themes Rivers2Morrow does not focus on:

