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## **Global Change and Baltic Coastal Zones**

### **Chapter 6: Climate Change and the Need for Integrated Coastal Risk Management in the Baltic Sea**

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#### **Abstract**

Climate Change and its consequences will significantly impact sandy coasts and coastal lowlands in the Baltic Sea region. The risks of flooding and coastal erosion will probably rise due to higher storm surge water levels. Further, it must be accounted for that long-term coastal retreat will increase if sea level rise accelerates. Traditionally, adaptation strategies focus on technical measures like sea dikes, revetments or beach replenishments. After the introduction, this chapter starts with a discussion of sea level rise scenarios. Next, it is argued that a sustainable adaptation strategy implies a holistic coastal risk management consisting of the elements prevention, protection, preparedness, emergency response, recovery and review. These integral components are described as parts of a control loop. The chapter ends with an outlook, including a reflection of the EU-Flood Directive.