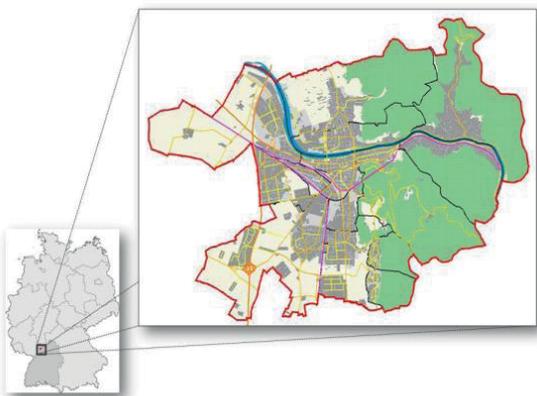


Heidelberg is situated in the Rhine Neckar Triangle, in southwest Germany, and on the banks of the river Neckar where it leaves the Forest of Odes and enters the Rhine Valley. The city's altitudes range from 100m to 568m above sea level; the highest point being the mountain region at Königstuhl. The city enjoys a mild temperate climate with an annual average temperature at land level of 10.2°C and an annual rainfall of 670mm. At Königstuhl the annual average temperature is 7.3°C and the annual rainfall is 920mm.

Heidelberg covers an area of about 109km<sup>2</sup>. Its population of 143,000 resides on 32.2km<sup>2</sup> or 29.6% of the total area. Home to Germany's oldest university and many other tertiary and research institutes, Heidelberg has established itself as a city of science. The city has an annual GDP of EUR 6,399 million and an average per capita income of EUR 26,500. Key economic activities include health and welfare services, manufacturing, and professional, scientific and technical services. Key business clusters include biotechnology, life sciences, information and environmental technology.

# HEIDELBERG

## Application of Singapore Index on Cities' Biodiversity



## NATIVE BIODIVERSITY

The city of Heidelberg is divided into four different natural units. They include the plains of the rivers Neckar and Rhine, the Bergstraße (mountain road), the crystalline forest of Odes and the red sandstone Odenwald. The latter contains original vegetation of subatlantic beech forest while the plains of the rivers provide a short distance (approximately 4km) of natural banks, gravel banks and floodplain forests.

Heidelberg has 3,329ha of forest, with the majority covered with trees and the remainder comprising of meadows and forest roads. The city's native species count includes 1,054 vascular plants, 130 birds, 98 butterflies, 15 bats and 32 fish.



### Improving Biodiversity in Agricultural Lands

Since 1992, farmers in Heidelberg have designated areas within their farm lands as ecological areas to facilitate movement of wildlife. More than 45ha of eco-links have been established, providing sanctuary and connectivity to endangered animals and plants. The red-backed shrike, a critically endangered bird, has benefitted from the initiative and has resettled in Heidelberg. Amazingly, these areas have also greatly enhanced the scenery and aesthetics of the landscape.



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# GOVERNANCE AND MANAGEMENT OF BIODIVERSITY

Heidelberg's biodiversity is managed by agencies and departments within the administration of the city. The Office of Environmental Protection, Trade Supervision and Energy is responsible for legal formalities and voluntary duties. The Landscape Architects and Forestry Office is responsible for the

green areas inside the city, parks and the forest. The Children and Youth Office is responsible for the education in kindergartens and recreational offers, but is not responsible for the curriculum at schools.

## Findings on the Application of the Singapore Index

1. Natural areas make up 4,808ha (including restored and naturalized areas) or 44% of total city area.
2. To be determined based on revised formula.
3. Baseline data (2012): 68 bird species in built-up areas.
4. Baseline data: 1,054 vascular plant species.
5. Baseline data: 130 bird species.
6. Baseline data: 98 butterfly species.
7. Baseline data: 15 mammal bat species.
8. Baseline data: 32 fish species.
9. Protected natural areas form approximately 5,879ha or 54% of the city.
10. Heidelberg has 14 invasive alien species. Therefore the proportion of invasive alien species as opposed to native species is 1.33 %.
11. Permeable area is estimated at 86.43% of the total city area.
12. This indicator is considered to be not particularly useful to Heidelberg at this moment.
13. Heidelberg has 4,854ha of area of parks with natural areas and protected or secured areas, providing 32.36ha/1,000 persons.
14. Not applicable
15. Heidelberg spent about 0.14% (EUR 638 000) of its annual budget on the Division of Nature Protection within the Office of Environmental Protection.
16. Heidelberg carried out 64 biodiversity and ecosystems related programmes and projects.
17. Heidelberg's LBSAP incorporates elements of NBSAP, and includes 4 or more CBD initiatives.
18. There are 3 facilities with essential biodiversity-related functions: botanical garden, zoological garden and the arboretum.
19. Heidelberg has 6 local government agencies involved in inter-agency cooperation pertaining to biodiversity matters: Office of Environmental Protection, Trade Supervision and Energy, Landscape Architects and Forestry Office, City Planning Office, Regional Office for Agriculture, Rhine-Neckar Regional Association and Vicinity Association Heidelberg-Mannheim.
20. Heidelberg conducts both formal and informal public consultations pertaining to biodiversity-related matters.
21. Heidelberg has 19 biodiversity-related partner agencies including government agencies, NGOs, research institutions and the private sector.
22. Biodiversity and nature awareness is included in state school curriculum, which also applies to Heidelberg.
23. Heidelberg conducted 182 outreach or public awareness events per year (based on 2011), which included 7041 participants.

Native Biodiversity  
in the City

Ecosystem  
Services

Governance and  
Management Of Biodiversity