

German Sustainability Indicator for Species Diversity – A New Approach to Policy Information on Sustainable Land Use and Biological Diversity

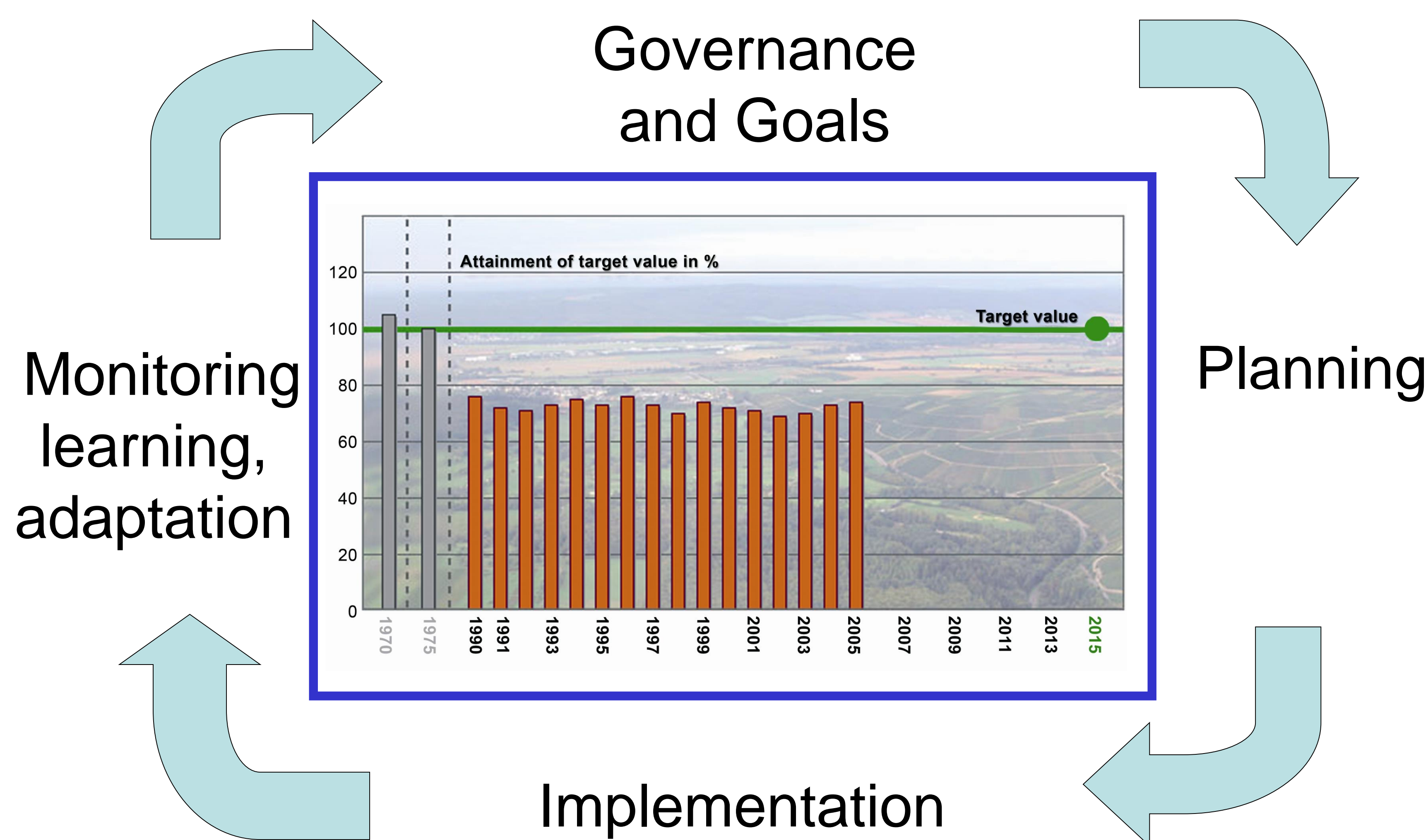
Zieschank, R.¹, Achtziger, R.², Stickroth, H.³, Wolter, C.¹ and Sukopp, U.⁴

Will sustainable development be effective if and when biodiversity declines? In order to answer this question, **sustainability indicators** provide the most comprehensive form of information about developments in economics, environment and society. They offer powerful and widely used tools for decision making and also for assessment of political programmes or social activities.

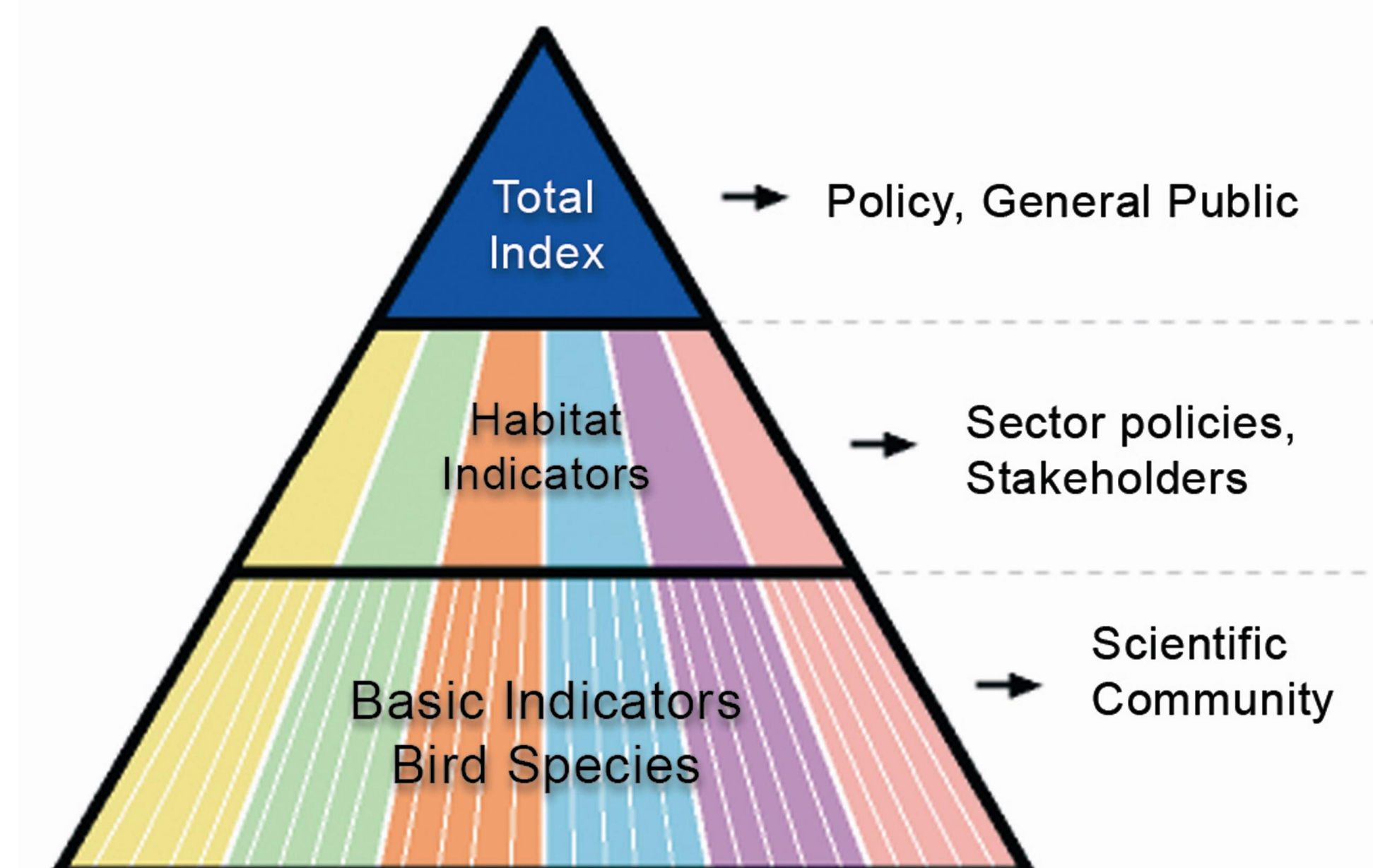
In Germany, a highly aggregated indicator for species diversity has been developed in a research project [1,2,3] led by the Federal Agency for Nature Conservation (BfN). The new indicator is one of the 21 headline indicators of the **German National Sustainability Strategy** and indicates the state and quality of Germany's nature and landscapes under the impact of land use.

Only sustainable forms of land use can assure long-term conservation of biodiversity. The **sustainability indicator for species diversity (SISD)** is based on the nationwide population trends of selected bird species which act as indicators for the main habitat and landscape types in Germany: farmland, forests, settlements, inland waters, coast/sea and Alps (see additional poster of the German BfN).

2. Indicators and the Policy Cycle to manage SD



1. Target groups of information



The pyramid construction of the indicator consists of three aggregation levels: Indicator bird species, main habitat and landscape types, total index.

The design corresponds to the information demand of different target groups

3. Functions of the new German Sustainability Indicator for Species Diversity for policy and the public

POLITICAL FUNCTIONS	SOCIETAL FUNCTIONS
Environmental reporting system (monitoring)	Instrument for „agenda setting“
Information for policy making (engineering)	Input for the formation of public opinion
Evaluation of policy measures as well as environmental quality (assessment)	Basis for social consensus about main environmental problems
Input to discussion on new priorities (goal finding)	Policy change in sectors / by main causes of environmental damage
Initiation of policy learning (enlightenment)	Facilitate acceptance of environmental policy

SISD = Innovative information system to integrate the issues of sustainability into several policy fields (policy integration)

Index and trend results of the German Sustainability Strategy are regularly reported to the public. The Indicator for Species Diversity is also proposed to contribute to similar reports dealing with biodiversity on the European level (<http://biodiversity-chm.eea.europa.eu/>) and will be presented at the planned Conference of the Parties to the Convention on Biological Diversity 2008 in Germany. Future research must build up a consistent set of biodiversity indicators and strategies to realise the targets of biodiversity conservation efforts.

CONTACT

¹ Roland Zieschank, Cornelia Wolter, Environmental Policy Research Centre (FFU), Freie Universität Berlin, Ihnestr. 22, D-14195 Berlin; zieschan@zedat.fu-berlin.de
² Dr. Roland Achtziger, Interdisciplinary Environmental Research Centre (IÖZ) TU Bergakademie Freiberg, Dept. Biology / Ecology, Leipziger Str. 29, D-09599 Freiberg
³ Dr. Hermann Stickroth, Sperberweg 4a, D-86156 Augsburg
⁴ Dr. Ulrich Sukopp, Federal Agency for Nature Conservation, Konstantinstraße 110, D-53179 Bonn

LITERATURE

[1] Achtziger, R., Stickroth, H. & Zieschank, R. (2004): Nachhaltigkeitsindikator für die Artenvielfalt – ein Indikator für den Zustand von Natur und Landschaft in Deutschland. *Angewandte Landschaftsökologie* 63.
[2] Zieschank, R., Stickroth, H. & Achtziger, R. (2004): Seismograph für den Zustand von Natur und Landschaft. Der Indikator für die Artenvielfalt. *politische ökologie* 91-92: 58-59.
[3] Achtziger, R., Stickroth, H., Zieschank, R., Wolter, C. & Schlumprecht, H. (2007): Nachhaltigkeitsindikator für die Artenvielfalt – Weiterentwicklung eines Indikators für den Zustand von Natur und Landschaft in Deutschland. – Naturschutz und Biologische Vielfalt: in prep.