Federal Ministry
of Food
and Agriculture

The National Action Plan on the Sustainable Use of Plant Protection Products in Germany – current developments

Dr. Wolfgang Zornbach

Federal Ministry of Food and Agriculture

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History

→ **2002**: extensive **dialogue** of plant protection policy in Germany

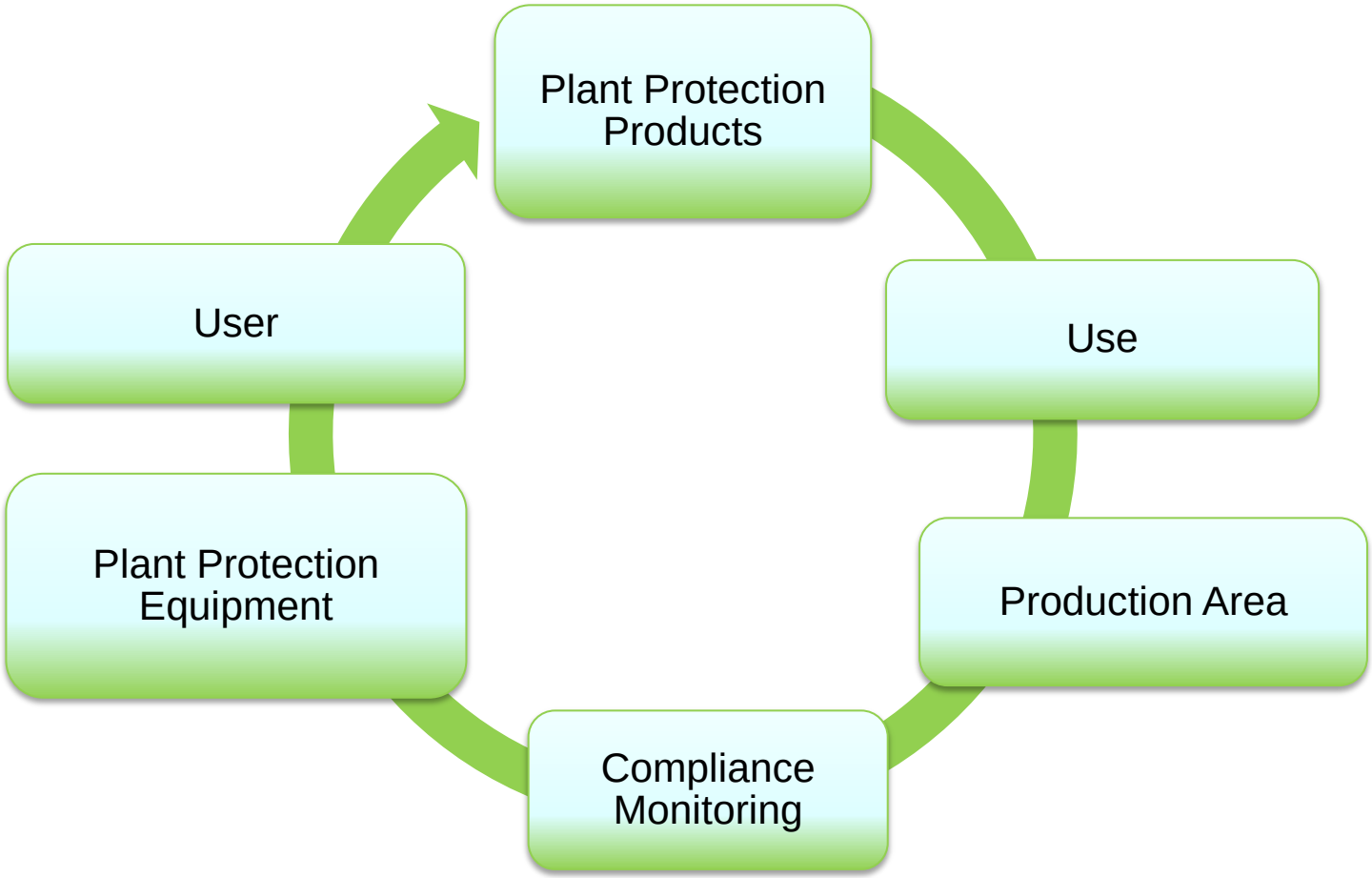
→ **2004**: "**Reduction program** of chemical plant protection“

→ **2008**: First “**National Action Plan** on Sustainable Use of Pesticides”

→ **2013**: New „**National Action Plan** on Sustainable Use of Pesticides”
based on Sustainable Use Directive (SUD)

Legal background

Plant Protection Act and Regulations



Current German National Action Plan

Agreed by German Federal Government (Cabinet) on 10 April 2013

Based on EU Sustainable Use Directive and National Plant Protection Act

In co-operation with Federal Länder

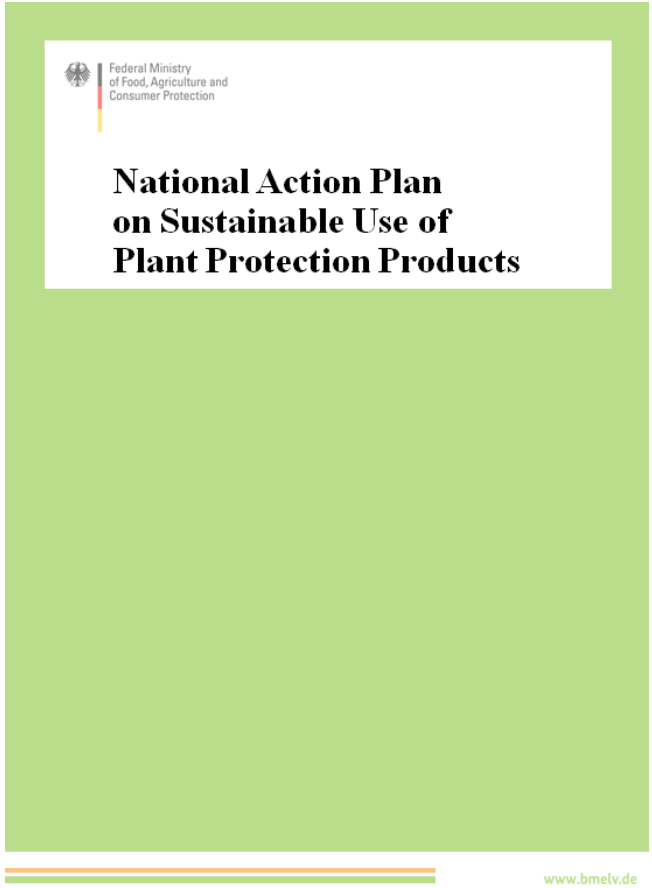
→ **Targets**

- **<u>Global</u> and <u>Specific</u> Targets**

→ **Measures**

→ **Indicators**

→ **Support**



Global Targets - Examples

→ **30 % reduction of risks** for the environment by 2023 (based on the average value for 1996 – 2005)

→ **Reduction of use to the necessary minimum**

→ **Reduction of the exceedings of the maximum residue levels** to **below 1 %** in all product groups for both domestically-produced and imported foods by 2021

→ Further **reduction** of **risks for operators, workers, bystanders and residents**

Fields for specific Targets

→ Agriculture, forestry and horticulture

→ Non-agricultural areas, Home gardens, Allotments

→ Operator protection and protection of bystanders

→ Consumer protection (food safety)

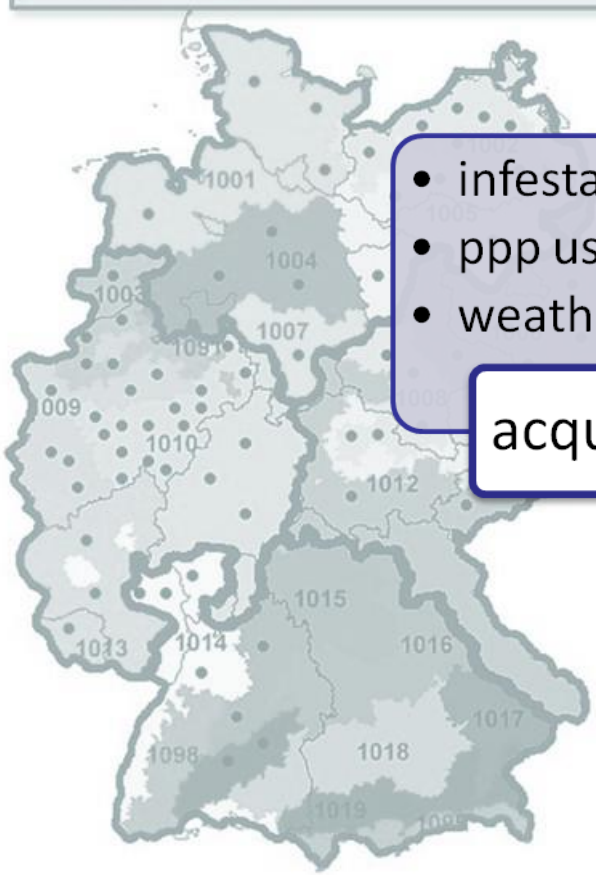
→ Environment (Protection of water bodies, Biodiversity)

Specific Targets: Examples Agriculture, Forestry, Horticulture

Target	Quant. Target	Date
Reduction of use of chemical plant protection products, that deviate significantly from the **necessary minimum** (network of reference farms)	95 % conformity with necessary minimum	ongoing
Crop- or sector specific guidelines on integrated pest management for all relevant crops or sectors	100 %	2018
Increasing the percentage of agricultural and horticultural **enterprises** working in accordance with **crop- or sector specific guidelines on integrated pest management**	30% 50%	3 years 5 years after publication of the respective guideline

Net of reference farms since 2007

Arable farming	= 76 farms
Field vegetable	= 28 farms
Apple orchard	= 19 farms
Vineyard	= 8 farms
Hop growing	= 3 farms



- infestation
- ppp use
- weather

acquisition

processing

- plausibility
- TFI
- Oracle db

- necessary minimum
- influences

validation

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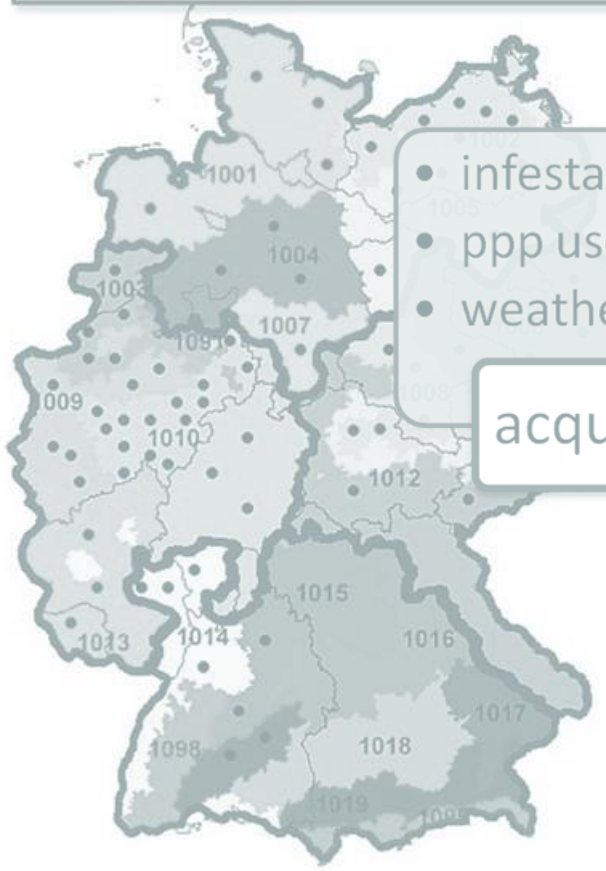

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Bearbeitet von / Compiled by:
Bernd Freier[1], Jörg Sellmann[2], Jürgen Schwarz[1], Marga Jahn[1], Eckard Moll[2], Volkmar Gutsche[1], Wolfgang Zornbach[4]

Unter Mitwirkung von / In collaboration with:
Anita Herzer[1], Merle Sellenriek[1], Rene Brand[1], Benita Burghardt[1], Christiane Seidel[1], Florian Kluge[1], Ute Müller[1], Christina Wagner[1], Christoph Hoffmann[3]
und der
Pflanzenschutzdienste der Länder

Netz Vergleichsbetriebe Pflanzenschutz
Jahresbericht 2009

Network of Reference Farms for Plant Protection
Annual Report 2009
Analysis of Results 2007 - 2009

Julius Kühn-Institut (JKI), Bundesforschungsinstitut für Kulturpflanzen
[1] Institut für Strategien und Folgenabschätzung im Pflanzenschutz, Kleinmachnow
[2] Zentrale DV-Gruppe, Kleinmachnow
[3] Institut für Pflanzenschutz im Obst- und Weinbau, Dossenheim/Siebeldingen
[4] Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz, Bonn

Berichte aus dem Julius Kühn-Institut

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Julius Kühn-Institut
Bundesforschungsinstitut für Kulturpflanzen

Treatment frequency indices, TFI [average 2007-2012]

The treatment frequency index (TFI) is used as indicator of the intensity of pesticide uses. It considers dose reduction in proportion to the authorised one and partial field application of each pesticide. For example, authorised dose in entire field means TFI = 1.0, half dose in entire field TFI = 0.5, and half dose in half field TFI = 0.25. In tank mixtures, pesticides are separately counted.

Crop	Herbicides	Fungicides	Insecticides
winter wheat	1.90 ±0.10	1.96 ±0.15	1.02 ±0.15
winter barley	1.64 ±0.09	1.28 ±0.11	0.52 ±0.27
winter oilseed rape	1.70 ±0.10	0.82 ±0.19	2.66 ±0.35

[Source: Reference Farms Network. Annual Report. Freier et al. 2012]

Use of reduced application rates [average 2007-2011]

Crop	Herbicides	Fungicides	Insecticides
winter wheat	70% ±3.56%	58% ±1.52%	91% ±3.39%
winter barley	67% ±4.69%	54% ±1.67%	93% ±1.95%
winter oilseed rape	74% ±0.89%	85% ±3.65%	99% ±1.82%

[Source: Reference Farms Network. Annual Report. Freier et al. 2012]

The “necessary minimum” in use of chemical plant protection products

The **“necessary minimum”** is the term used to describe the amount of chemical plant protection products needed to ensure crops are successful, not least as regards their economic viability. It assumes that all other practicable options to prevent and deter harmful organisms have been exhausted and that consumer, environment and user protection provisions have been adequately taken into account. [NAP 2013]

Crop	2007	2008	2009	2010	2011
Winter wheat	88.7 %	85.8 %	89.8 %	89.2%	91.8%
Winter barley	94.8 %	84.9 %	86.0 %	90.6%	93.8%
Winter oilseed rape	87.7 %	81.8 %	87.4 %	89.3%	91.4%
Field vegetables	83.4 %	89.8 %	86.7 %	87.3%	94.4%
Apples	94.5 %	94.6 %	91.7 %	95.3%	95.7%
Grapes	99.5 %	95.5 %	98.3 %	97.5%	96.0%
Hops	100 %	96.6 %	98.8 %	82.5%	94.0%

[Reference Farms Network. Freier et al. 2012]

Specific Targets: Examples Agriculture, Forestry, Horticulture

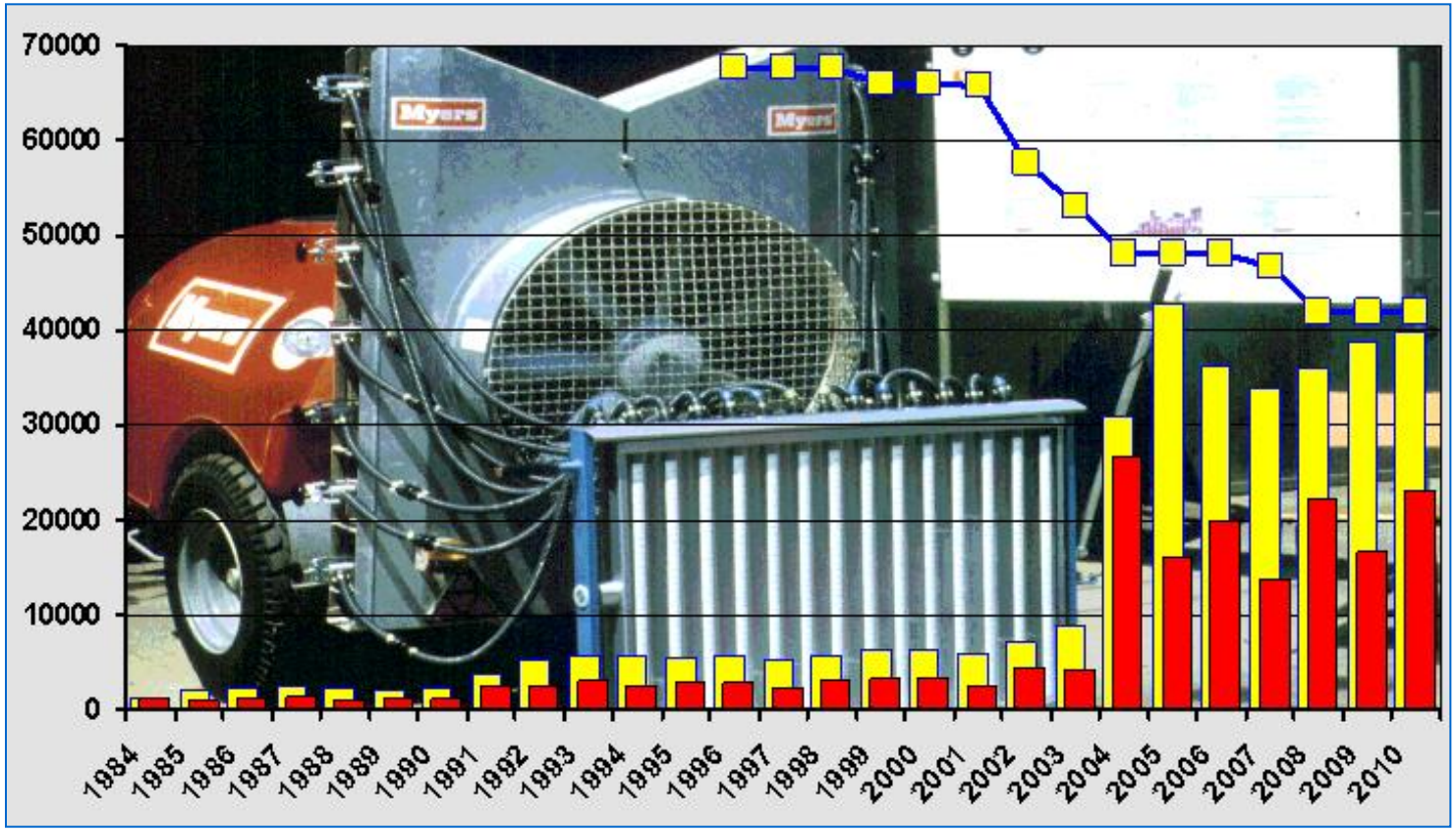
Target	Quant. Target	Date
Improvement of the **availability of plant protection products**, particularly for minor uses, for storage protection and for suitable resistance strategies	in 80 % of all relevant areas, at least three groups of active substances available	2023
Elaborating **resistance strategies** in order to ensure appropriate management for important crops and sectors	for 100 % of all relevant crops	2018
Reduction of domestic sales of **active substances of particular concern**, with the focus on risk reduction	specific to active substances	2018

Specific Targets: Example Operator protection

Target	Quant. Target	Date
Increasing the use of **spray-drift-reducing plant protection equipment**	More than 50 % of plant protection equipment with spray-drift-reduction class 75 % or higher	2023

Inspection of air-assisted sprayers

[Source: JKI-AT]



Number of air-assisted sprayers controlled within 2 years

Number of air-assisted sprayers controlled annually

Number of air-assisted sprayers in Germany (mainly estimated)

Specific Targets: Example Consumer protection

Target	Quant. Target	Date
Reduction of the rate of **exceedings** of **maximum residue levels**, across all product groups and among all domestic and imported products	below 1 %	2021

percentage of rejected goods due to MRL exceedance

Year	Germany	EU	3rd countries	unknown origin
2009 [n=2,077]	0.7	1.4	3.2	0.9
2010 [n=3,723]	0.7	1.9	2.7	1.7

[Source: BVL]

Most critical goods are: rucola, lettuce, root celery, peas, fruit vegetables, table grapes, stone fruits, citrus, strawberry, raspberry, kiwi, tea

→target: < 1 % until 2021

Specific Targets: Water

Target	Quant. Target	Date
No exceedings of the limits for all active substances of plant protection products and relevant metabolites in surface waters used for obtaining **drinking water**	100 % of the samples with findings below 0.1 µg/l	2015 (WFD)
Buffer zones, permanently covered with vegetation and at least **5 m** in width, at **all surface waters in sensitive areas**	80 % 100 %	2018 2023
Reduction of **risks** from plant protection products for **water organisms**, calculated by means of SYNOPS risk indices for test organisms	Reduction by 20 % 30%	 2018 2023

PPP findings in groundwater

[surface-close filtrated sampling sites]

PPP findings	1990-1995	1996-2000	2001-2005	2006-2008
Without findings	71.7 %	72.4 %	78.6 %	82.6 %
Detected ≤ 0.1µg/l	18.6 %	19.0 %	16.1 %	12.8 %
Detected >0.1-1µg/l	8.6 %	7.9 %	4.5 %	3.8 %
Detected > 1µg/l	1.1 %	0.7 %	0.8 %	0.8 %
Total > 0.1µg/l	9.7 %	8.6 %	5.3 %	4.6 %

[Source: UBA]

Specific Targets: Biodiversity

Target	Quant. Target	Date
Increase in the proportion of agricultural area on which work is performed in accordance the **Organic Farming** Regulation (National Sustainability Strategy)	20 % of the agricultural and horticultural area	open
Raising the proportion of **habitats** and retreat areas in the farmed landscape that can contribute to **protection** and fostering **beneficial organisms** and **non-target organisms**	Depending on the agricultural landscape: 3 to 7 % of the area 5 to 10 % of the area	2018 2023
Reduction of the exposure of **pollinating insects** to plant protection products	no quantified objective set	open

Measures - Examples

→ Research and innovation

→ Necessary minimum (Reference farms)

→ Demonstration farms

→ Guidelines on integrated pest management

→ Plant protection products containing active substances of particular concern

Measures - Examples

→ Strengthening the tax-payed plant protection services

→ Improving knowledge and information

→ Compliance and illegal trade of plant protection products

→ Expert Groups on „Water“ and „Biodiversity"

Indicators - Examples

→ SYNOPS – environmental risk indicator

→ Residue Monitoring (food)

→ Water Monitoring (surface water and groundwater)

→ Compliance with the necessary minimum

→ Efficiency (yield per ha)

→ High-Nature-Farmland-Indicator
(European Agricultural Fund for Rural Development)

Indicators - Examples

- → Use and Sales of Plant Protection Products
- → Extension Index
- → Integrated Pest Management
  (% Farms with Guidelines)
- → Status report on biological control
- → Yield security through plant protection
  (Yield losses without plant protection)
- → Bees (poisoning, residues in bee bread)

Support - Examples

- → Technical Coordination
- → Scientific support
- → Scientific Advisory Board
- → Forum
- → Self-commitments and contributions of associations
- → Resources for implementation (no own budget)

Website on the National Action Plan

www.nap-pflanzenschutz.de

Information on:

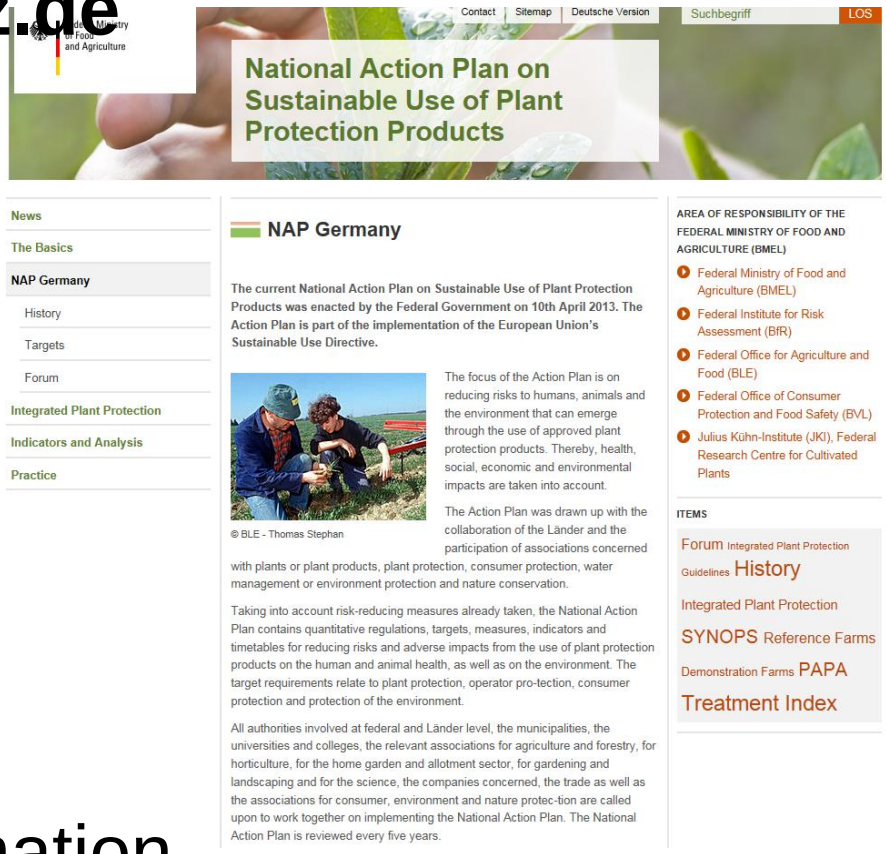
→ National Action Plan

→ New developments

→ Benefits and risks of plant protection

→ Indicators

→ Links to relevant information



Dr. Wolfgang Zornbach

Federal Ministry of Food and Agriculture
Rochusstraße 1
53123 Bonn

Tel.: +49 228 99529 4317

Wolfgang.Zornbach@bmel.bund.de

www.bmel.de

www.nap-pflanzenschutz.de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Thank you very much for your attention!