

PEARL: Overview of developments

Erik van den Berg, Aaldrik Tiktak, Jos Boesten, Daniel van Kraalingen, Joop Kroes and Ton van der Linden

Outline presentation

- Introduction
- Overview of developments 2000 - 2009
- Developments in near future 2010 - 2011

Pearl

Introduction: the (Geo-)PEARL team

PBL:

Aaldrik Tiktak

RIVM:

Ton van der Linden

Alterra:

Erik van den Berg

Mechteld ter Horst

Roel Kruine

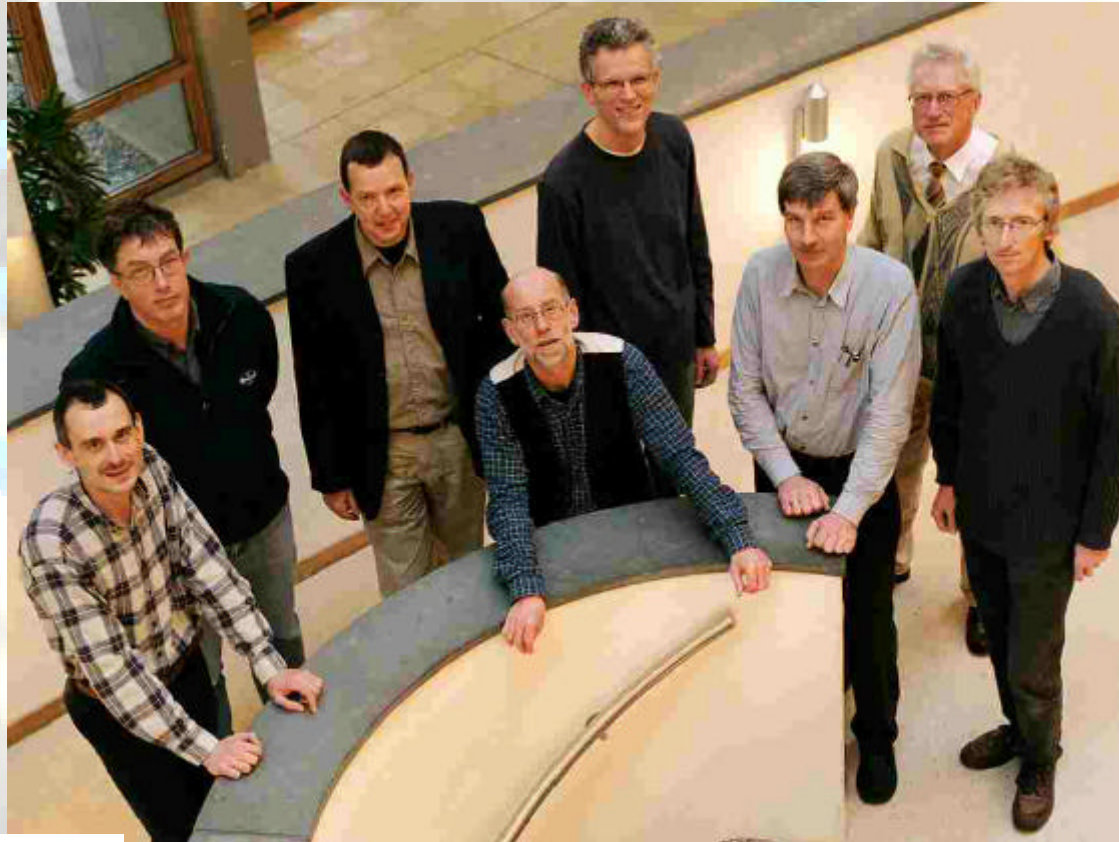
Minze Leistra

Jos Boesten

Joop Kroes

Rob Hendriks

Daniel van Kraalingen



PEARL

FOCUS-PEARL

FOCUS_PEARL

Developed to be used in registration procedure for plant protection products in EU

Target

- 80th percentile average yearly leaching concentration at 1 m depth

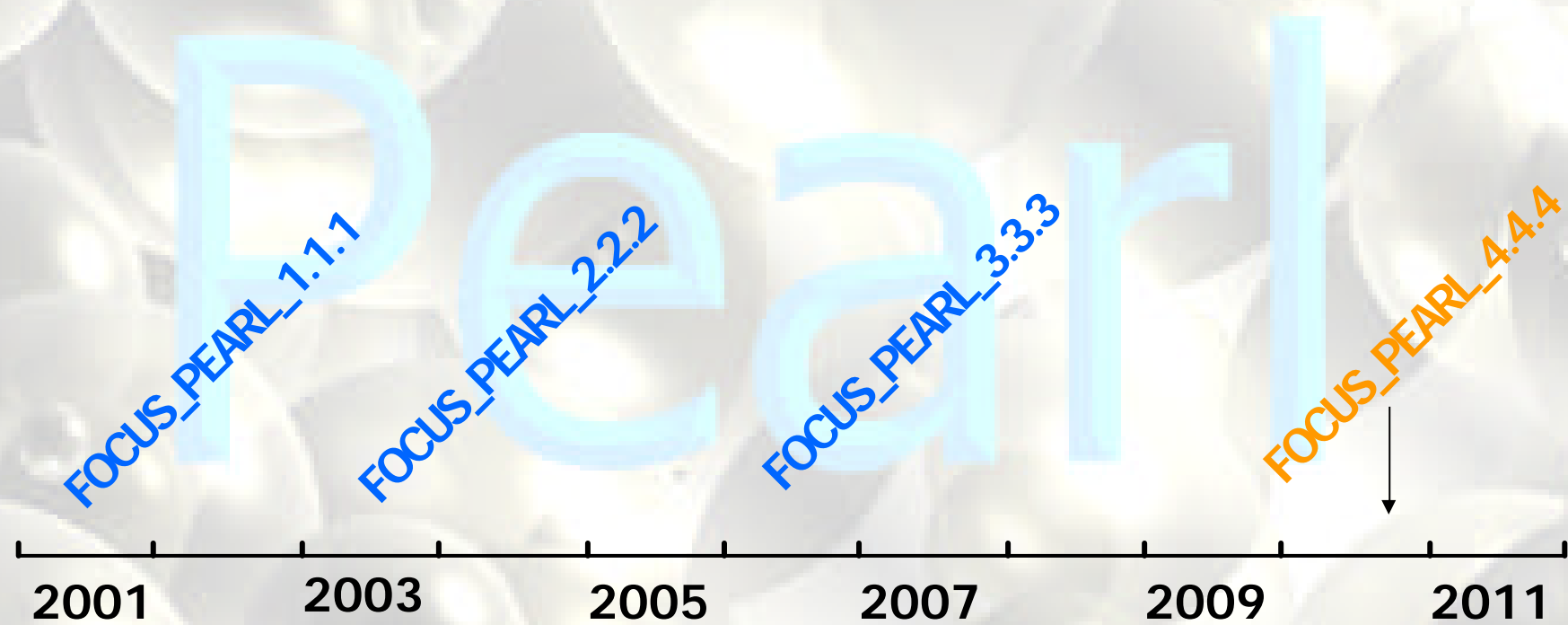
Realisation

- *FOCUS_PEARL_1.1.1 released in January 2001*

FOCUS_PEARL releases:

3 releases of FOCUS versions

1 new release of FOCUS version in 2010



FOCUS_PEARL developments

FOCUS_PEARL_4.4.4 to be released in 2010

- *Implementation of revised FOCUS scenarios in database and user interface*
- *model kernel with preferential flow option and improved volatilisation concepts*
- *model kernel to be used in new interim scenario NL for surface water in combination with TOXSWA*

PEARL

Consensus-PEARL

Consensus_PEARL

Developed in support of work of FOCUS_Air workgroup

- *Description of relevant processes to describe fate on plant surfaces*
- *Meteorological data on an hourly basis*

Realisation

Consensus_PEARL_1 released in October 2004

Consensus_PEARL releases (research versions):

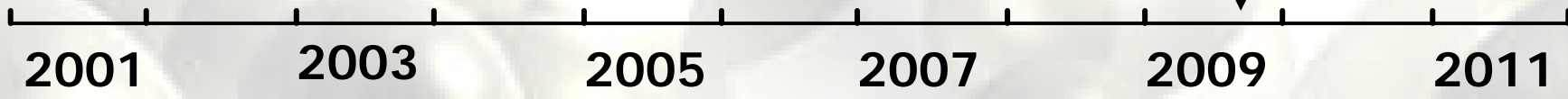
1 releases of research version in support of FOCUS_Air

2 bug-fix releases of research version

PEARL

Consensus_PEARL_1

Consensus_PEARL_2
Consensus_PEARL_3



Consensus_PEARL developments

New functionalities implemented in beta-version of FOCUS_PEARL_4.4.4.:

- Improved volatilisation concepts
- Moisture dependent sorption
- Hourly meteorological input data is option

Linux-PEARL

Linux-PEARL

Linux_PEARL

Developed in request of third parties

- *Based on FOCUS_PEARL_333*
- *Operational on Ubuntu, Suse and Fedora*

Realisation

Linux_PEARL_1 released in March 2009

Linux_PEARL releases (research versions):

1 release of research version based on
FOCUS_PEARL_333

1 bug-fix releases of research version

PEARL

Linux_PEARL_1
Linux_PEARL_2
Linux_PEARL_3



2008

2009

2010

2011

Linux_PEARL developments

New version based on FOCUS_PEARL_4.4.4.; release at the same time as FOCUS_PEARL_444

Pearl

GeoPEARL

Developed to be used in Dutch pesticide registration

Target

- 90th percentile leaching concentration (time average) in area of use

Realisation

- *GeoPEARL_1_1_1 released in September 2004*

GeoPEARL releases:

3 releases of GeoPEARL versions

1 new release early 2011: GeoPEARL_444



GeoPEARL developments

***New version using improved schematisation:
GeoPEARL_4_4_4***

Linux version of GeoPEARL_2_2_2 (in progress)

Linux version of GeoPEARL_4_4_4 in 2011

Future of PEARL

Model concepts for run-off in relation to use of FOCUS_TOXSWA at EU level

Maintain state-of-the art of model concepts

Ensure stable and reliable applications of model on Windows and Linux platforms

Maintain software quality assurance

Pearl

Thank you for your attention