



Federal Office
of Civil Protection and
Disaster Assistance

CBRN Response, Capability Building, Training Programmes in the Federal Republic of Germany

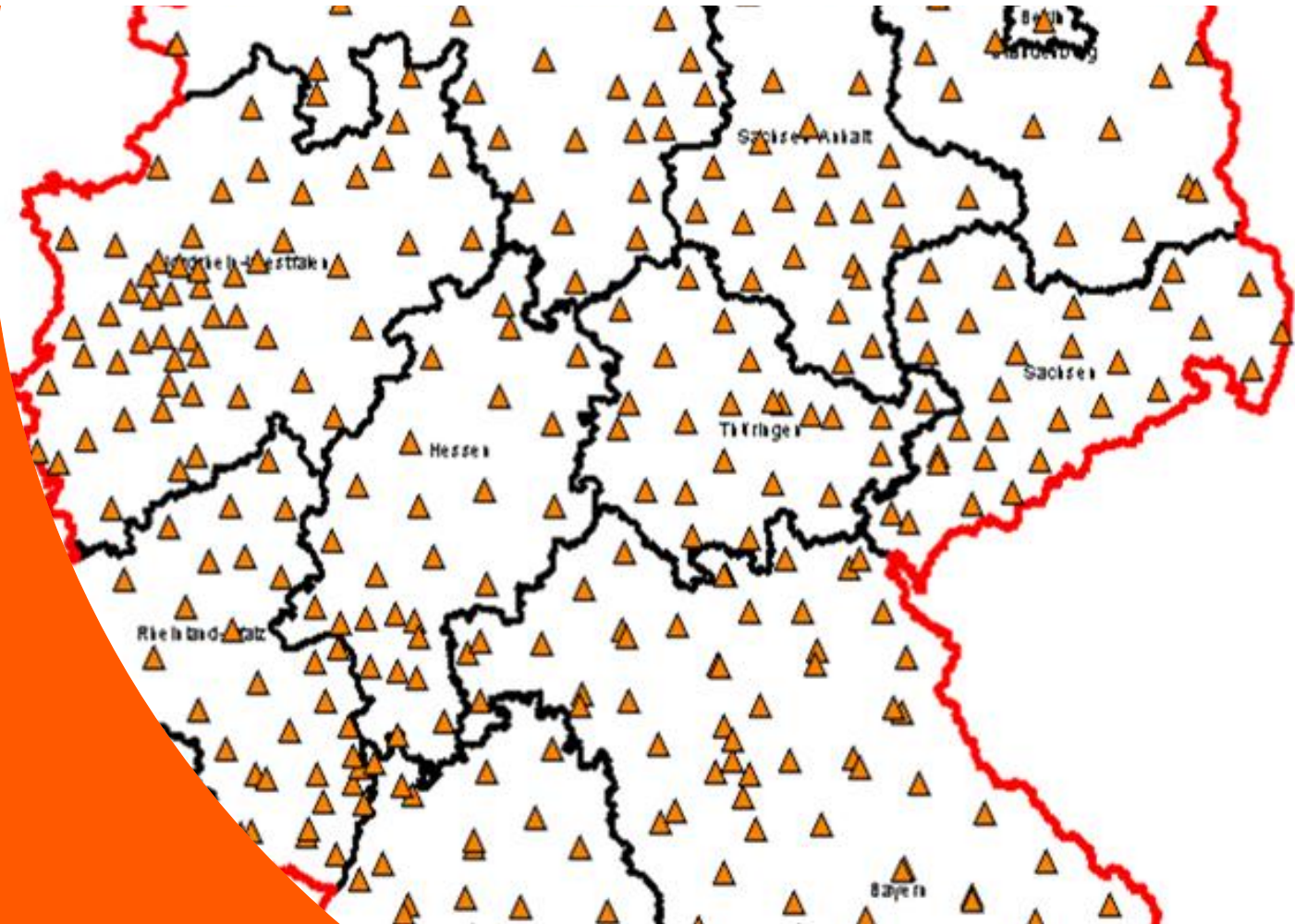
Academy for Crisis Management, Emergency Planning and Civil Protection



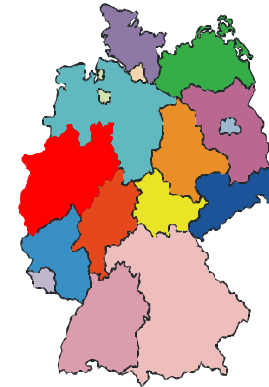
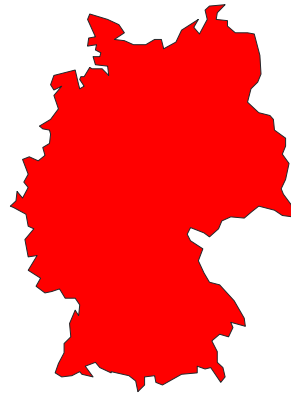
Agenda

- Integrated Emergency Response and Civil Protection System in the Federal Republic of Germany
- CBRN Response and Capability Building at state and federal level
- CBRN Training Programmes
- Challenges/Perspectives

Integrated Emergency Response and Civil Protection System in Germany



Constitutional Framework: Responsibilities in Civil Protection and Disaster Relief



**Protection of the population
in times of war (Civil Protection)**
(Art. 73 Abs. 1 Nr. 1 German Basic Law)



**Federal
Government**



BUNDESPOLIZEI



**Protection of the population
in peace times (Disaster relief)**
(Art. 30, 70 German Basic Law)



States (16 Länder)



Players in Civil Protection

Fire brigades

- ~ **1.200.000** volunteers
- ~ **28.000** professionals
- ~ **30.000** private plant firefighters

Fire Fighting, Technical Assistance and Rescue, CBRN Protection



Technisches Hilfswerk (THW) (Federal Agency for Technical Relief)

- ~ **80.000** volunteers

Technical support with special equipment for Search and rescue, Water purification etc.



(Private) Relief Organisations

- ~ **400.000** volunteers

Mainly paramedic services for emergency medical support and care, life guard,



Deutsches Rotes Kreuz 



DIE JOHANNITER

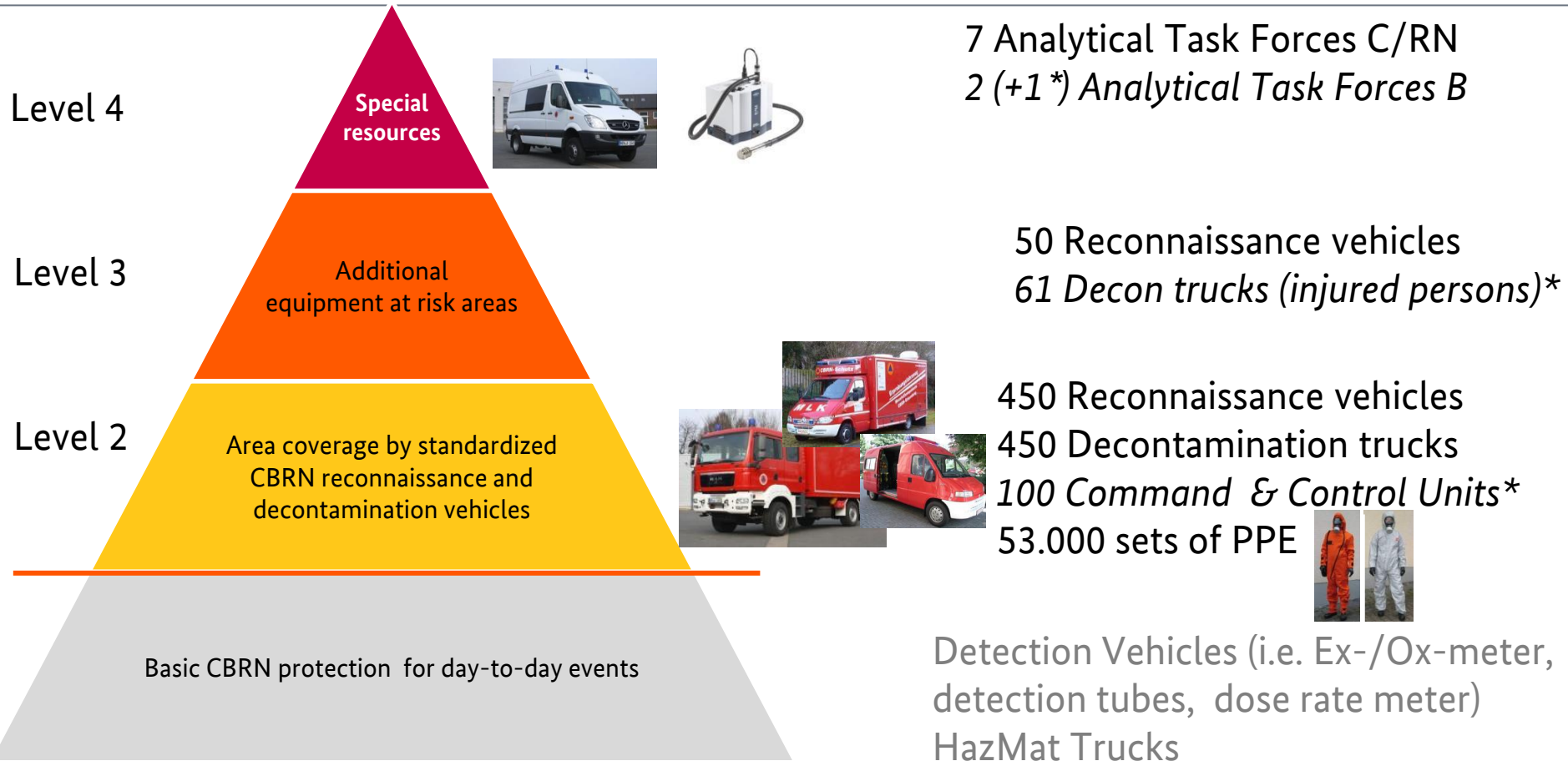


 **Malteser**

CBRN Response and Capability Building in Civil Protection



Provision of Standardized CBRN Equipment



The states (municipalities) provide the personnel, the equipment is provided by the Federation

* Provision planned for near future)

CBRN Reconnaissance Vehicle (CBRN ErkW)

- **Continuous detection** of **chemical** and **radioactive** contamination, even while driving:
Rapid monitoring of large areas
- **Identification** of certain industrial chemicals and chemical warfare agents
- **Rapid situation display** by linking the data with geographic coordinates; → Situation Map
- Standardized equipment for **CBRN sampling**



Currently **319 CBRN ErkW** nationwide distributed (at district level)

Decontamination Truck (GW Dekon P)

- Main task: **Decontamination of personnel**
(and limited: mobile victims)
- Contains equipment to establish a decontamination post for up to 50 persons/hour
- Currently **380 GW Dekon-P** provided
- Total of 511 GW Dekon-P planned,
- 61 of them equipped for the **decontamination of injured persons** as part of the “**Medical Task Force**”

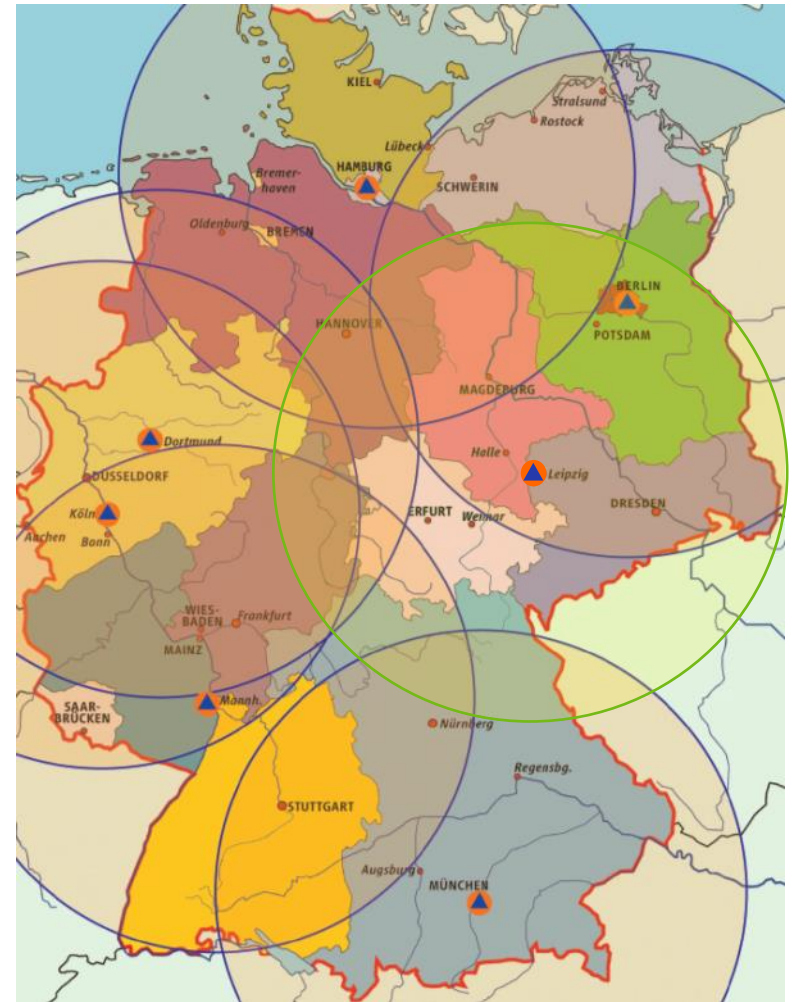


Foto: BBK, III.2 - CBRN Protection

Level 4:

The Analytical Task Force - ATF C-RN

- Seven ATF (C-RN) sites with focus on **chemical/radiological incidents**:
 - Fire Dept. Hamburg
 - Fire Dept. Mannheim
 - Criminal Dept. Berlin (LKA)
 - Fire Dept. Dortmund
 - Fire Dept. Cologne
 - Fire Dept. Munich
 - Fire Dept. Leipzig (since Sept. 2014)
- Operational radius approx. 200 km
- Arrival on scene (GER) after max. 3 hrs.
- Approx. 170 operations per year



ATF C-RN: Main Tasks Support and Advice

C/RN Analytics

Sampling

CBRN Advice

- Detection and **identification** of **chemical substances**
- Capability of RN detection and **nuclide identification** (γ)
- (Preventive) monitoring of large areas via remote sensing
- **Qualified CBRN sampling** (according to SIBCRA standards)
- Risk assessment and prognosis
- Recommendation of appropriate counter measures



Σ: All-in-one „CBRN Service“ for the incident commander

ATF C-RN: Structure

- **Qualification:** Scientists/Technical Engineers with field experience (Fire officer/Police officer) as ATF Team Leader
- Up-to-date mobile analytical equipment
 - **GC/MS**
 - **FT-Infrared spectrometer**
 - **FT-Infrared stand-off detector**
 - **RAMAN spectrometer**
 - **Gamma spectrometer**
 - **X-Ray Fluorescence** (new: 2016)
- IT-, communication and documentation equipment
- Basic CBRN equipment, e.g. ion mobility spectrometer, photo ionisation detector, test tubes etc.,
- **ATF vehicles:** 1 ATF Command Vehicle, 1 ATF Logistic Truck, 2 CBRN Reconnaissance Vehicles



Development of the ATF-B

Pilot project (2012-2015)

- Pilot sites: ●
 - State Criminal Department Berlin
 - Firebrigade Essen
- Concept development / Exercises / Equipment testing

Practical Phase I (since 2015)

- Preparation of establishing
- 1 additional site: Munich ●

Tasks (selection)

- Sample taking and –transportation
- Preliminary detection and identification of biological agents
- Situation assessment / Advice / Recommendations



CBRN Training Programmes: Training in Civil Protection



Training at
State Level
and
Federal Level

CBRN Training at state level: Municipalities and State Fire Service Colleges

CBRN training is regulated by the nationwide Fire Service Regulation No. 2 for voluntary fire fighters:

1. Training at municipality or county level and,
 2. Specialist and leadership training at state level in State Fire Service Colleges
- **CBRN-related basic training** for all (regular) fire fighters and all non-CBRN team leaders
 - **CBRN specialist training : detection, decontamination, CBRN operations** (varies between 35 and 70 hours for each task)
 - **CBRN training (leadership)** for CBRN team leaders (additional 70 hours)
- ➡ **Obligatory training, including CBRN civil protection training**

Target Groups: CBRN Experts / Team Leaders / Trainers

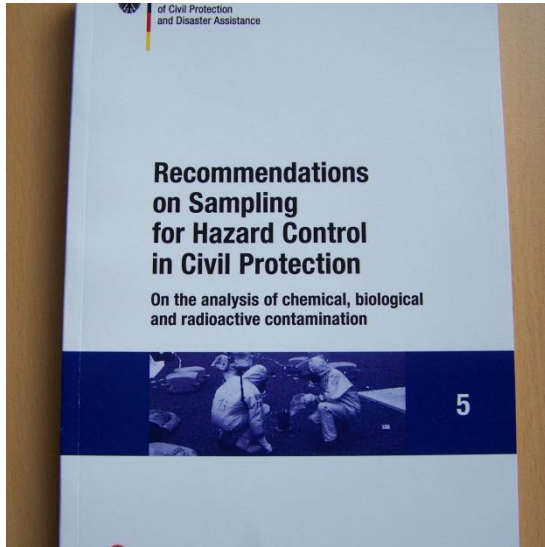
(Advisers: Chemists, Biologists, Physicists from technical authorities and scientific institutions; Fire Chiefs, Trainers from the State Firebrigade Colleges)

Main Topics:

- Detection / Identification of CBRN agents
 - CBRN Sampling
 - CBRN Risk Assessment
 - Decontamination
 - **Medical Response / Psychosocial Support** in CBRN situations
- ➔ Advanced training above the level of the states**
- International Basic and Advanced CBRN Trainer Courses



National Training - Example CBRN Sampling



Standardized procedures/documentation



Standardized Equipment



Training and exercises

Conditions for a standardized sampling:
complete package offered by the Federal Government (by BBK)

http://www.bbk.bund.de/SharedDocs/Downloads/BBK/EN/booklets_leaflets/Recom_on_Sampl.pdf?__blob=publicationFile

International CBRN Trainer Course – Training methods

Methodical procedure: Theoretical introduction, followed by practical demonstration, learning by doing „step by step“, training and exercise at different sites / levels



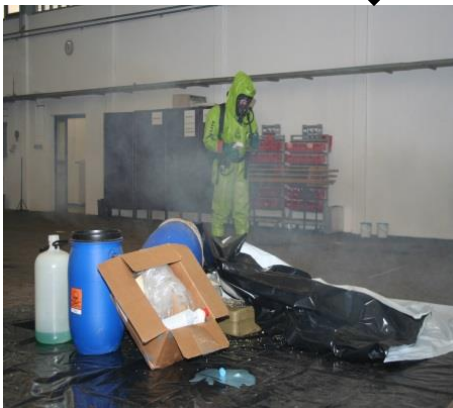
C-Detection: principles



Decontamination of victims:
„step by step“



Exercise: Psychosocial support
in CBRN-incidents



Exercise:
C-Detection



Staff training:
Chemical incident

Challenges/Perspectives

Challenges: CBRN threats comprise a wide range and could occur anywhere at any time

- from small accidental releases of hazardous substances during industrial production, storage and transport over
- Availability and deliberate release of biological and chemical substances, including chemical warfare agents to proliferation of nuclear weapons and their delivery systems,

Perspectives: national and international

- Improvement of risk awareness and common understanding concerning CBRN threats by exchange of information and networking between the players
- Further development of standardized equipment and standard operating procedures (SOPs)
- Improvement of interdisciplinary / interagency communication and cooperation by networking between authorities and training centres
- Development of harmonised training curricula, efficient training methods, e.g. low-risk practical training tools, virtual training, internet-based simulation tools