



ifa
INTERNATIONAL
FERTILIZER ASSOCIATION



Improving the World through Product Stewardship

Volker Andresen,
IFA Director,
Technical & Safety-Health-Environment Committee



AFA Annual Forum, Cairo, 14 February 2018

AGENDA



What is Product Stewardship all about?



How does IFA help to address the issues?



How has the fertilizer industry improved?

AGENDA



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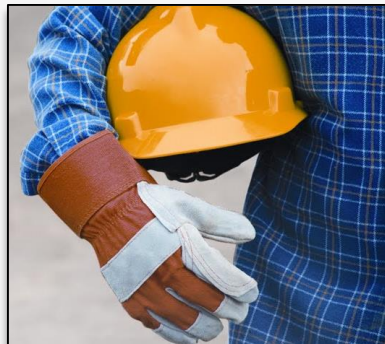


How has the fertilizer industry improved?

I. WHAT IS PRODUCT STEWARDSHIP ALL ABOUT?

- **Product Stewardship** is where safety, health, and environmental protection centers on the product itself, and everyone involved in the lifespan of the product is called upon to take up responsibility to reduce any negative impacts.

(IFA dictionary: **S**afety, **H**ealth, and **E**nvironment = **SHE**)



I. WHAT IS PRODUCT STEWARDSHIP ALL ABOUT?

Safety issues exist in our fertilizer industry, too ... the reasons and products vary



Toulouse



Pacific Ocean



Gulf of Finland



Russia



New York



Nairobi



**West,
Texas**



Oslo



Afghanistan

I. WHAT IS PRODUCT STEWARDSHIP ALL ABOUT?

Those **safety** issues can be put into two categories:



Gulf of Finland

Accidents



Russia



West,
Texas

Pacific Ocean



New York

Misuse



Nairobi



Oslo



I. WHAT IS PRODUCT STEWARDSHIP ALL ABOUT?

- There are no official fertilizer industry numbers relating to employee **health** at work *publicly* available but the following fact should be a call-to-action for every employer, everywhere:



“Work kills more people than wars.”
(2.3 million per year)

Guy Ryder, Director General,
International Labour Organization

I. WHAT IS PRODUCT STEWARDSHIP ALL ABOUT?

- Fertilizer *production* also has an impact on the **environment**:
 - A) It accounts for roughly 1% of all Global Greenhouse Gas emissions *
 - B) It releases several other emissions across all major product areas
 - C) It consumes approximately 1.2% of the world's total energy **

And government pressure on the chemical sector continues to increase:



195 countries agreed to reduce emissions and energy consumption
(United Nations COP 21 event in Paris, 12 December 2015)

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What is Product Stewardship all about?

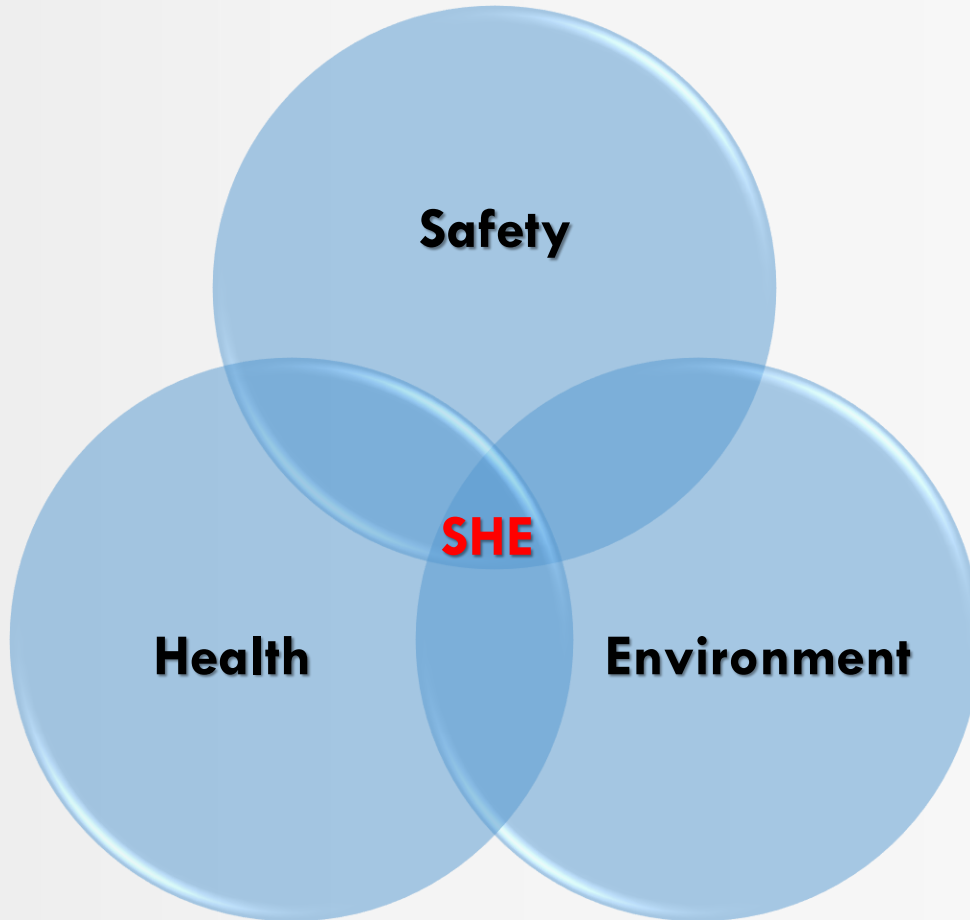


How does IFA help to address the issues?



How has the fertilizer industry improved?

II. HOW DOES IFA HELP TO ADDRESS THE ISSUES?



○ SHE-specific initiatives:

- A) 12 SHE Principles for members
- B) Protect & Sustain certification
- C) Best practice events + trainings
- D) Green Leaf Award
- E) SHE Excellence Gold Medals

II. HOW DOES IFA HELP TO ADDRESS THE ISSUES?

The voluntary Protect & Sustain certification was developed by IFA with the independent auditors of DNV-GL and SGS. It has become the de facto **global product stewardship standard for fertilizers**.

Protect & Sustain **covers** the quality, safety, health, and environmental aspects of the **ISO 9001** and **ISO 14001**, as well as the **OHSAS 18001** certifications.

The IFA standard also has many points in common with **Responsible Care 14001** which addresses the whole chemical industry.

What makes Protect & Sustain **unique**, is that it is **tailored for fertilizers**, that it is the only certification that includes **product security questions**, and that it is a **points-based system** which makes it sustainable over time.

○ SHE-specific example:

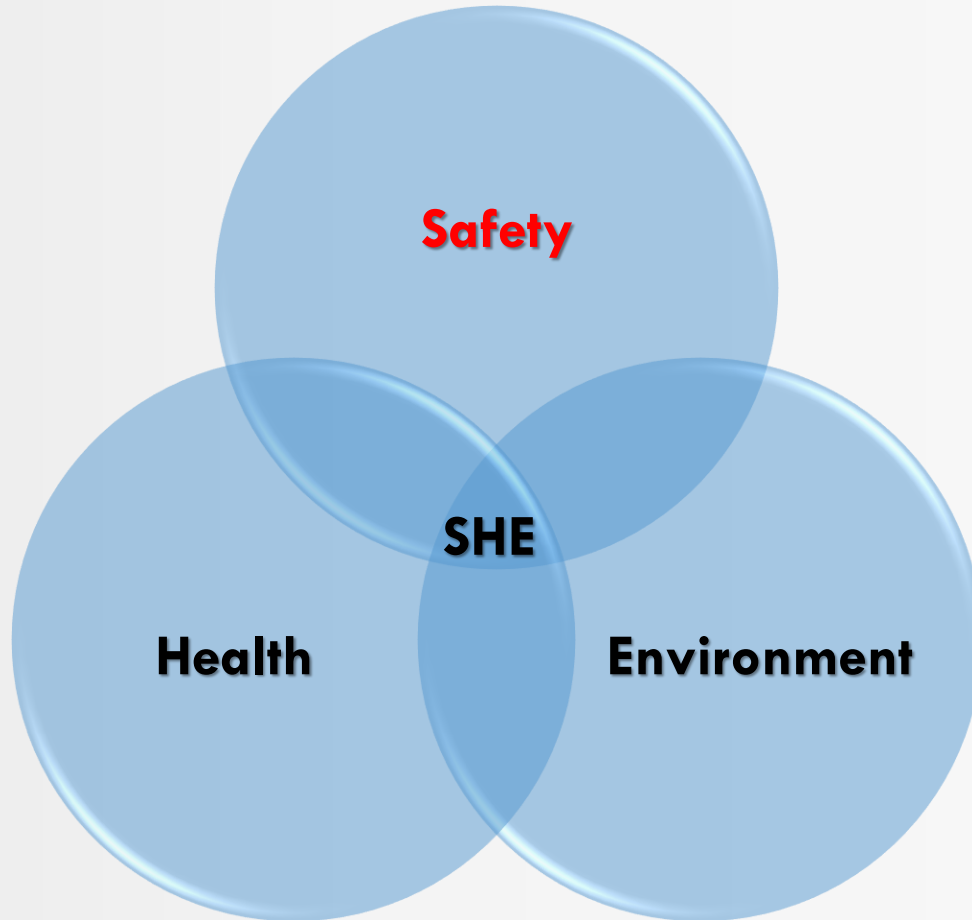
- A) 12 SHE Principles for members
- B) Protect & Sustain certification**
- C) Best practice events + trainings
- D) Green Leaf Award
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Business benefits include:

- Safe working conditions
- Protected environment
- Safe communities
- Good reputation
- More profitability
- Less risk for everyone

II. HOW DOES IFA HELP TO ADDRESS THE ISSUES?



○ Safety-specific initiatives:

- A) Safety Handbook (best practices)
- B) Product Security Working Group

II. HOW DOES IFA HELP TO ADDRESS THE ISSUES?

International **subject matter experts** are available to advise IFA members and organizations/governments/armies/police/etc.

Workshops continue to take place around the world to raise awareness of potential issues with *nitrogenous* fertilizers.

IFA published tutorial **video + posters** (*photo #1*).

20 product security-specific questions were added to IFA's Protect & Sustain **certification**.

IFA helped with the development of **chemicals detection kits** for border controls (*photo #2*).

🕒 **Safety-specific example:**

A) Safety Handbook (best practices)

B) Product Security Working Group

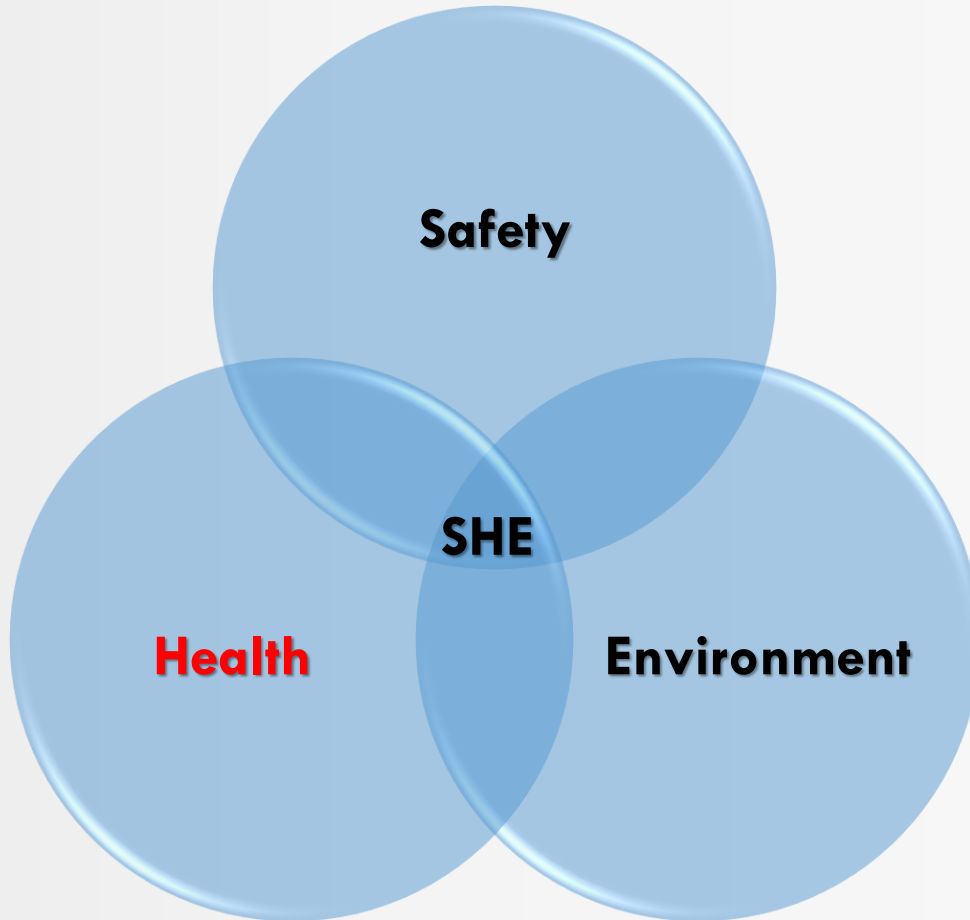


Video URL: www.bit.ly/2FnQGPK



Note: Many national fertilizer associations and local companies also have their own SHE initiatives

II. HOW DOES IFA HELP TO ADDRESS THE ISSUES?



○ Health-specific initiatives:

- A) Employee Safety Benchmark
- B) Employee Perceptions Survey
- C) Incident Reporting Portal (IRP)

II. HOW DOES IFA HELP TO ADDRESS THE ISSUES?

A voluntary **Safety Barometer** (see photo) was developed by IFA with the independent analysts of the NSC.

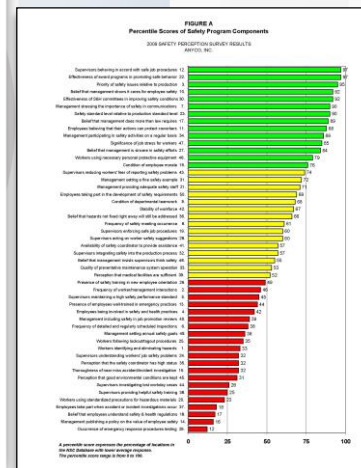
Its check-list confidentially asks employees to rate 50 safety indicators for their workplace.

A report with recommendations is provided to every participating company by the NSC.

It is available in 22 languages, takes 10 minutes to complete and can be conducted on paper + online, any time (on-demand).

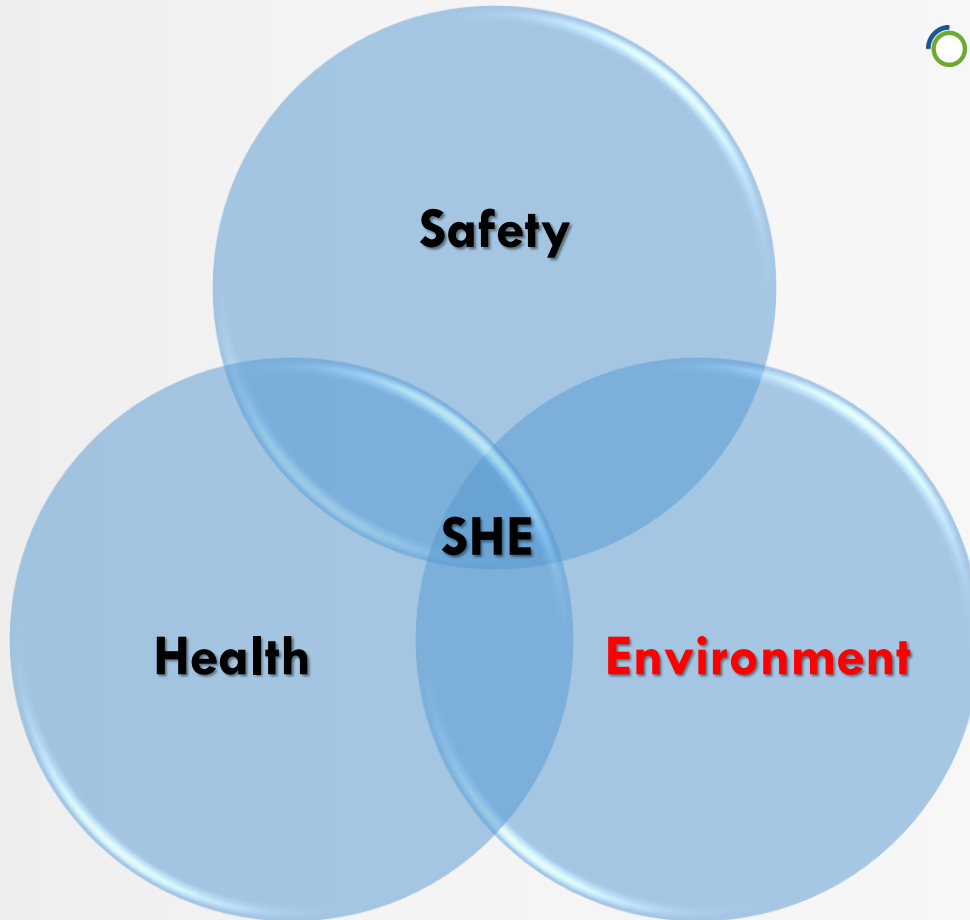
Health-specific example:

- A) Employee Safety Benchmark
- B) Employee Perceptions Survey**
- C) Incident Reporting Portal (IRP)



Note: Many national fertilizer associations and local companies also have their own SHE initiatives 15

II. HOW DOES IFA HELP TO ADDRESS THE ISSUES?



Environment-specific initiatives:

- A) Fertilizer Emissions Benchmark (N, P, K)
- B) Energy Efficiency & CO₂ Benchmark
- C) NORM Working Group (Phosphogypsum)

II. HOW DOES IFA HELP TO ADDRESS THE ISSUES?

A voluntary **questionnaire for ammonia producers** was developed by IFA with the independent analysts of PTAI.

Exercise is conducted for member companies around the world, every three years.

A detailed benchmarking report is provided to every participating company by PTAI.

Environment-specific example:

- A) Fertilizer Emissions Benchmark (N, P, K)
- B) Energy Efficiency & CO₂ Benchmark**
- C) NORM Working Group (Phosphogypsum)



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What is Product Stewardship all about?



How does IFA help to address the issues?



How has the fertilizer industry improved?

III. HOW HAS THE FERTILIZER INDUSTRY IMPROVED?

Measurable results concerning IFA's **SHE**-specific initiatives include:

Protect & Sustain: 50 certified fertilizer companies in 54 countries



Countries: Australia, Austria, Argentina, Bahrain, Belgium, Brazil, Cameroun, Canada, Chile, China, Columbia, Czech Republic, Croatia, Egypt, France, Finland, Germany, Ghana, Greece, Hungary, India, Indonesia, Israel, Italy, Ivory Coast, Jordan, Kenya, South Korea, Lithuania, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Norway, Oman, Pakistan, Poland, Portugal, Romania, Russia, Qatar, Saudi Arabia, South Africa, Spain, Sweden, Tanzania, Thailand, Trinidad and Tobago, United Arab Emirates, United Kingdom, USA, Vietnam.

Note: Protect & Sustain is now available for **non-producers** (fertilizer distributors, ports, traders, and transporters), as well.



III. HOW HAS THE FERTILIZER INDUSTRY IMPROVED?

Measurable results concerning IFA's **Safety**-specific initiatives include:



“Teaming with IFA’s global Product Security Working Group is one important reason why the number of casualties in Afghanistan has started to drop.”

(Lieutenant General John Johnson,
head of the U.S. Army’s JIEDDO)

The big picture

Fertilizer manufacturers recognize the potential to criminally misuse its nitrogenous products to make improvised explosive devices.



© Fotolia - Trehose

III. HOW HAS THE FERTILIZER INDUSTRY IMPROVED?

Measurable results concerning IFA's **Health**-specific initiatives include:

- Good participation in IFA's voluntary Employee Safety Benchmark
- Average Lost Time Injuries Rate (LTIR) improved significantly since its introduction in 2004
- Total Recordable Injuries Rate (TRIR) also improved since its introduction in 2012
- Best safety practices adoption worldwide



III. HOW HAS THE FERTILIZER INDUSTRY IMPROVED?

Measurable results concerning IFA's **Environment**-specific initiatives include:

- Good participation in IFA's voluntary Energy Efficiency & CO₂ Emissions Benchmark
- Energy efficiency of ammonia plants increased significantly since benchmark started in 2004
- CO₂ emissions of ammonia plants decreased significantly since benchmark started in 2004
- Best available technologies adoption worldwide



CONCLUSIONS



Product Stewardship is about responsible handling of products throughout their entire lifespan



IFA created tools for its members to address safety, health, and environmental weaknesses



The fertilizer industry yielded encouraging results ... but there is *always* more room for improvement



Leading by example: IFA Board of Directors

WE HOPE TO SEE YOU IN MADRID, TOO!

○ Global Technical Symposium (9-12 April 2018)

Shaping Tomorrow's Technology Landscape

○ Event highlights:

- IFA conference with side events and exhibition, plus networking opportunities and technical visit of Fertiberia.
- Gala Dinner at the Casino de Madrid.
- 200 technical leaders from 40 countries, including the IFA Executive Board and Fertilizers Europe leaders.

○ For more information and quick registration:

www.ifa-madrid2018.org



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