



**COUNCIL OF
THE EUROPEAN UNION**

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COVER NOTE

From:	Secretary-General of the European Commission, signed by Mr Jordi AYET PUIGARNAU, Director
date of receipt:	23 January 2014
To:	Mr Uwe CORSEPIUS, Secretary-General of the Council of the European Union

No. Cion doc.:	SWD(2014) 21 final - PART 3/4
Subject:	Commission staff working document Impact Assessment <i>accompanying the document</i> Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Exploration and production of hydrocarbons (such as shale gas) using high volume hydraulic fracturing in the EU

Delegations will find attached document SWD(2014) 21 final - PART 3/4.

Encl.: SWD(2014) 21 final - PART 3/4



Brussels, 22.1.2014
SWD(2014) 21 final

PART 3/4

COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT

Accompanying the document

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**Exploration and production of hydrocarbons (such as shale gas) using high volume
hydraulic fracturing in the EU**

{COM(2014) 23 final}
{SWD(2014) 22 final}

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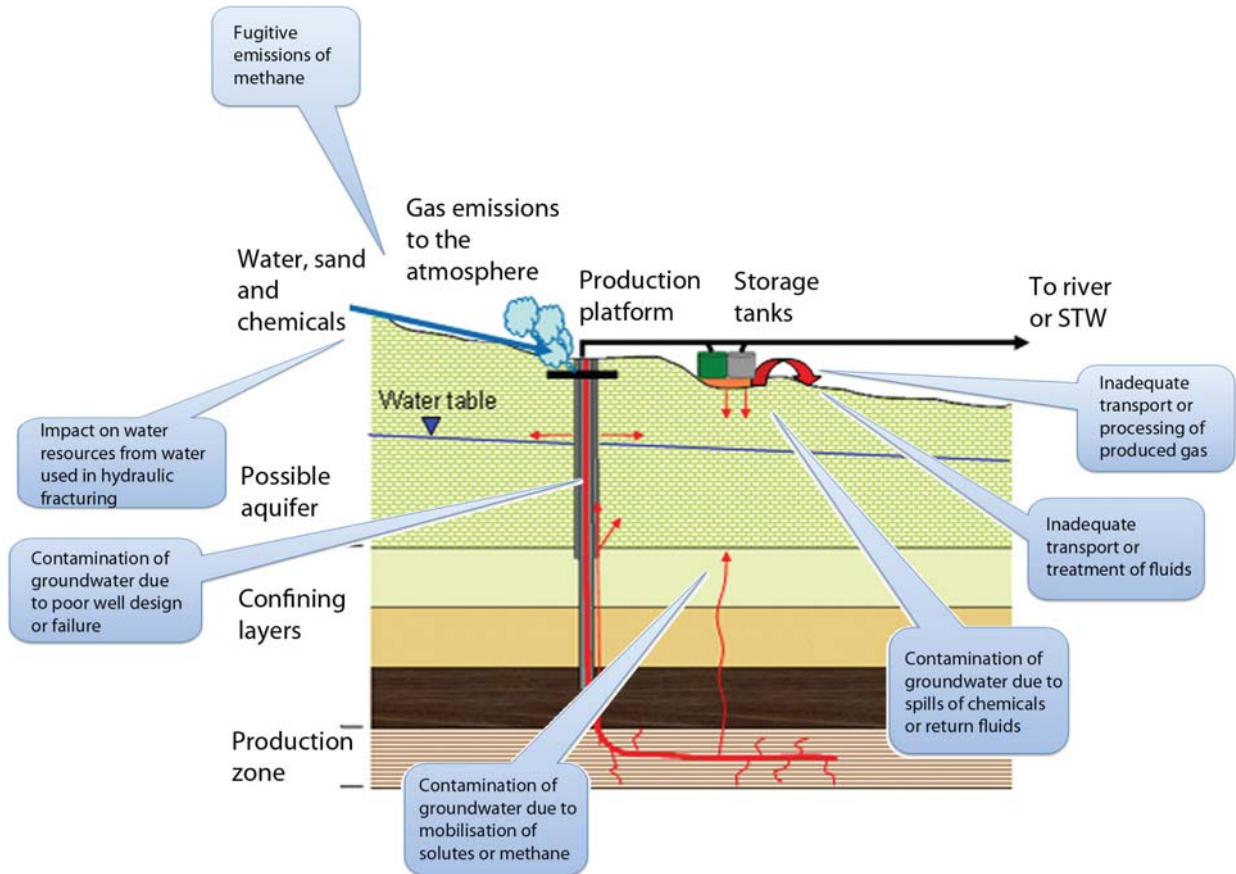
4.1. General impacts pathways

4.2. Chemicals' pathways

4.3. RFF risks pathways

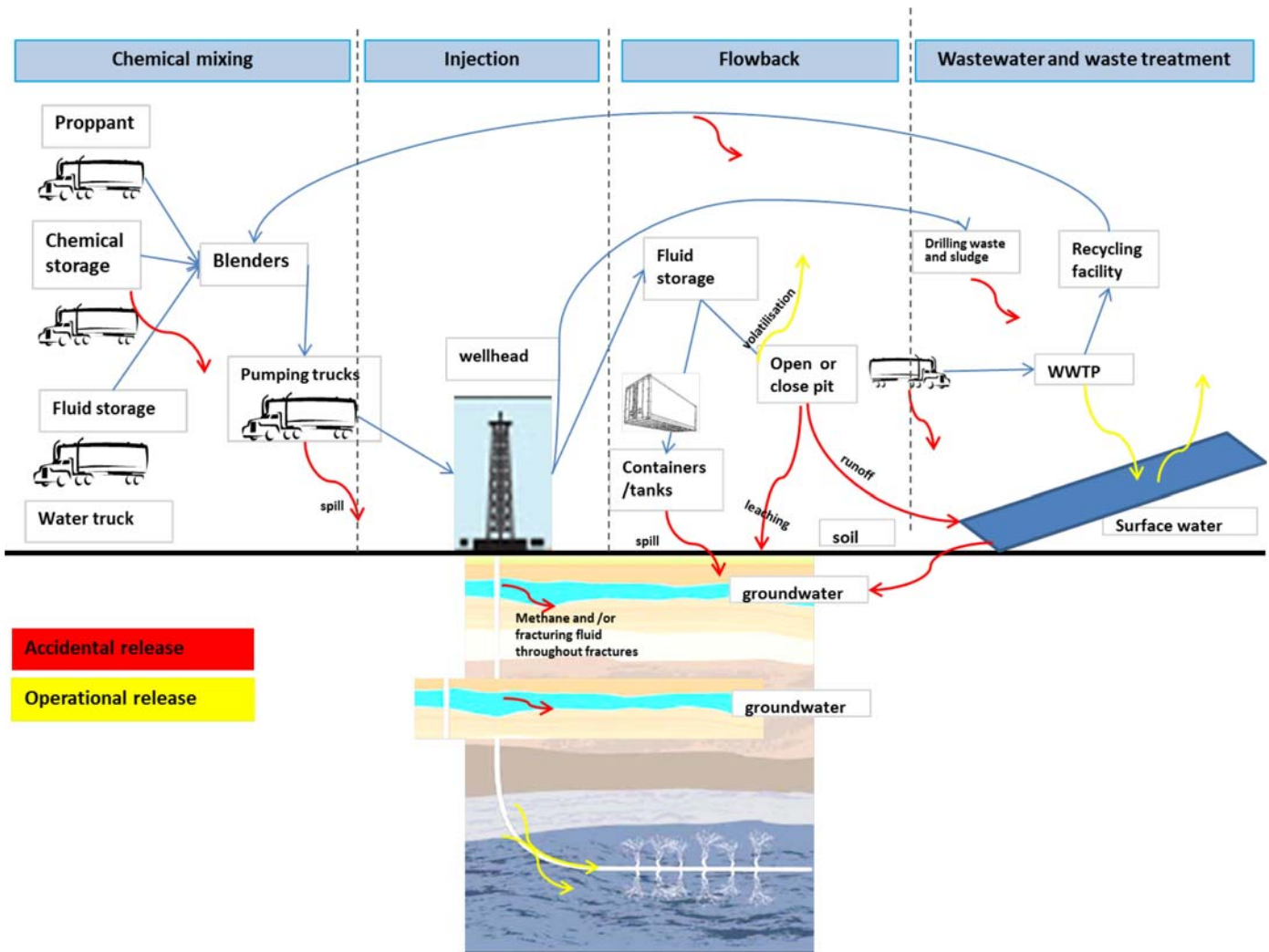
ANNEX 4. ENVIRONMENTAL IMPACT PATHWAYS

4.1 General impacts pathways



Source: Pollutant pathways associated with hydraulic fracturing. Source: Adapted from Environment Agency (England) (2013) © Environment Agency right

4.2 Chemicals' pathways

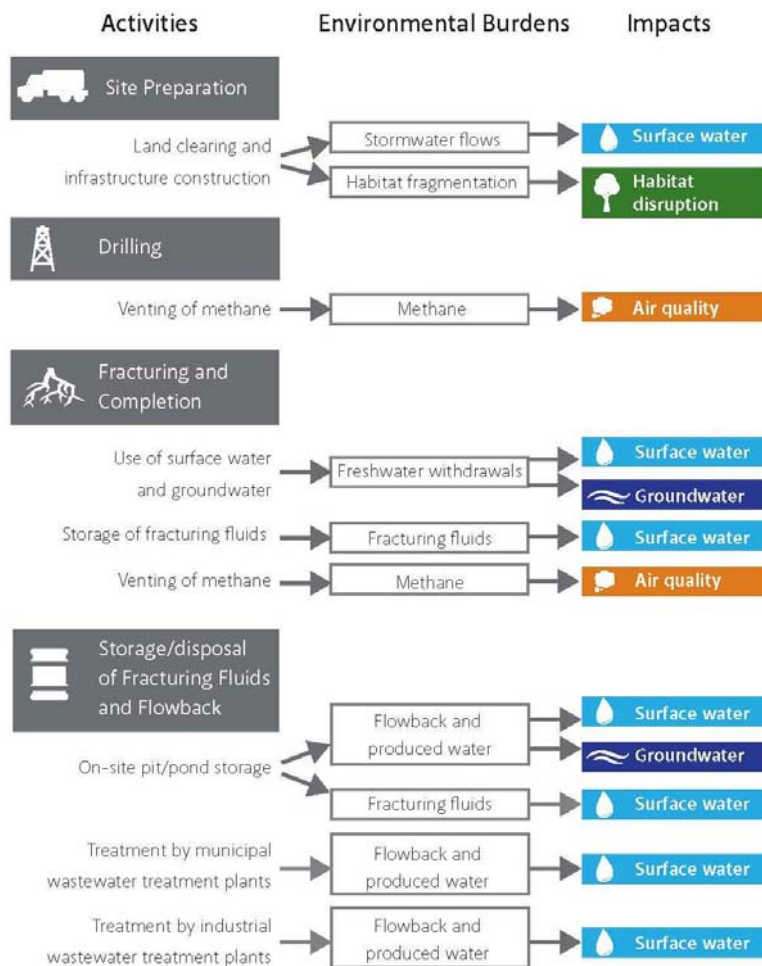


Source: "Spatially-resolved Assessment of Land and Water Use Scenarios for Shale Gas Development: Poland and Germany", JRC IES, forthcoming

4.3. RFF risks pathways

Source: RFF report, Pathways to Dialogue What the Experts Say about the Environmental Risks of Shale Gas Development, Alan Krupnick, Hal Gordon, and Sheila Olmstead, 2013 (accessible at: http://www.rff.org/Documents/RFF-Rpt-PathwaystoDialogue_FullReport.pdf)- RFF retains copyright on this figure.

ROUTINE RISK PATHWAYS



ADDITIONAL ROUTINE RISK PATHWAYS IDENTIFIED BY TOP EXPERTS



ACCIDENT RISKS PATHWAYS

