

# HOW SHALE GAS DEVELOPMENT (FRACKING) AFFECTS PUBLIC HEALTH

Multiple risks to our health and environment

#### **ISSUES**

### **Process of fracking:**

- · Disrupts natural environment such as land and publicly accessible water
- Creates extensive infrastructure in multiple stages and sites
- · Produces large amounts of liquid and solid waste

#### **Health concerns:**

- · Chemical release associated with resource extraction such as endocrine disrupting chemicals
- · Release of technically enhanced naturally occuring radioactive material (TENORMs) and naturally occuring radioactive material (NORMs)

### **Inequality:**

- · Environmental justice
- · Eminent domain

# **ENVIRONMENTAL** PATHWAY(S) OF **EXPOSURE**

**CHEMICAL** AND PHYSICAL **POLLUTANTS** 

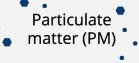


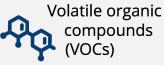












Heavy metals 💽



Liquid/solid waste



# **EXPOSURE** PATHWAY(S) **DISRUPTING** HEALTH



**Inhalation** 



**Ingestion** 



### **WHO IS IMPACTED**



**Individual Community Population** 



### Magnitude of exposure such as:

- Duration
- Frequency
- Toxicity
- Distance/proximity to sources
- · Source of emission and stage of production
- · Aggregate/combination of emissions

### Vulnerability of the individual

Occupational hazard

### **SHORT TERM HEALTH EFFECTS**

- Stress
- Eye, nose, throat irritation
- Skin irritation
- · Headache
- Dizziness
- Nausea
- Asthma attacks
- · Chest pains
- Acute bronchitis
- · Short term memory impairment
- Decreased excercise tolerance
- · Adverse effects on developing fetus



## **LONG TERM HEALTH EFFECTS**

- Worsening pulmonary or heart disease
- · Asthma
- · Chronic bronchitis
- · Cancer such as nasal, throat, and lung
- · Adverse effects on developing fetus
- · Leukemia
- · Aplastic anemia





