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## **1. Introduction**

The environment is the surroundings in which humans live and upon which they depend to meet their basic needs for air, water, and food. With industrial and technological advancements, serious environmental problems have begun to emerge, threatening human health and the stability of the ecosystem.

Environmental pollution is one of the most prominent of these problems. Iraq faces significant environmental challenges as a result of political and economic conditions and successive wars, making environmental pollution an important issue that requires study and research.

### **1.1 The importance of the environment and its role in human life**

The environment plays a fundamental role in human life. It is the source of natural resources upon which we depend for our livelihoods, and it directly impacts our health, economic activity, and social well-being. Protecting the environment ensures the sustainability of life and the achievement of sustainable development.

### **1.2 The concept of environmental pollution**

Environmental pollution is any unnatural change that occurs to the elements of the environment as a result of the introduction of harmful materials or energy, which leads to a disruption of the ecological balance and negatively affects humans and other living organisms.

### **1.3 Reasons for choosing the topic of environmental pollution in Iraq**

This topic was chosen because of the increasing manifestations of pollution in Iraq, and the increasing health and economic impacts, in addition to the urgent need to raise the level of environmental awareness in society.

## **2. The concept of environmental pollution**

### **2.1 Definition of environmental pollution**

**Environmental pollution is defined as the presence of pollutants in the environment at concentrations that cause harm to humans or living organisms, or negatively affect natural resources.**

### **2.2 Types of environmental pollution**

#### **2.2.1 Air pollution**

**It results from the emission of toxic gases from factories, transportation, and generators, and leads to the spread of respiratory diseases.**

#### **2.2.2 Water pollution**

**This occurs due to the discharge of untreated sewage and industrial waste into rivers, threatening human health and aquatic life.**

#### **2.2.3 Soil pollution**

**It results from the use of chemical pesticides and the dumping of solid waste, and affects the fertility of agricultural lands.**

#### **2.2.4 Soil pollution**

**It results from loud noises such as generators and transportation, and causes psychological and health disturbances.**

## **3. Causes of environmental pollution in Iraq**

### **3.1 Industrial activities**

**Factories that do not comply with environmental standards contribute to increased pollution, especially in areas close to cities.**

### **3.2 Wars and military waste**

**Wars have left behind large quantities of debris that have affected the soil and water.**

### **3.3 Burning waste and petroleum derivatives**

**The indiscriminate burning of waste leads to the emission of toxic gases that pollute the air.**

### **3.4 Transportation and gas emissions**

**Older vehicles contribute to increased levels of air pollution.**

### **3.5 Poor waste management**

**Weak waste collection and treatment systems are among the most important causes of pollution.**

## **4. Manifestations of environmental pollution in Iraq**

### **4.1 Air pollution in major cities**

**Pollution is clearly visible in cities due to overcrowding and generators.**

### **4.2 Pollution of rivers and surface water**

**Rivers suffer from the dumping of waste and sewage.**

### **4.3 Pollution of agricultural lands**

**As a result of excessive use of chemicals.**

### **4.4 Impact of dust storms**

**This leads to environmental degradation and an increase in respiratory diseases.**

## **5. Effects of environmental pollution in Iraq**

### **5.1 Health effects on humans**

**Increased incidence of respiratory and cancerous diseases.**

### **5.2 Economic impacts**

**Increased treatment costs and declining agricultural production.**

### **5.3 Social impacts**

**Decreased standard of living and increased poverty.**

### **5.4 Environmental impacts on biodiversity**

**The number of living organisms has declined and some have become extinct.**

## **6. The role of government and institutions in reducing pollution**

### **6.1 Environmental laws and regulations**

**We will enact laws aimed at protecting the environment and reducing pollution.**

### **6.2 The role of the Ministry of Environment**

**Monitoring pollution sources and developing environmental plans.**

### **6.3 The role of non-governmental organization**

**Raising awareness and implementing environmental initiatives.**

## **7. The role of the individual and society in protecting the environment**

### **7.1 The role of the individual and society in protecting the environment**

**Spreading environmental awareness among members of society.**

## **7.2 Correct environmental behaviours**

**Such as reducing waste and maintaining cleanliness.**

## **7.3 The role of educational institutions**

**Instilling environmental awareness in students.**

# **8. Solutions and proposals to reduce environmental pollution in Iraq**

## **8.1 Short term solutions**

**Improving waste collection and factory oversight.**

## **8.2 Long term solutions**

**Reliance on renewable energy and environmental planning.**

## **8.3 Benefit from international experiences**

**Applying successful models in environmental protection.**

# **9. Conclusion**

## **9.1 Most important results**

**The research showed that environmental pollution in Iraq is a serious problem affecting all aspects of life.**

## **9.2 Recommendations**

**The need for concerted efforts from the government and society to reduce pollution and protect the environment.**