1.Biotic and Abiotic Factors An ecosystem is defined as any group of living and non-living things that work together. Ecosystems do not have clear boundaries, and it may be difficult to see where one ecosystem ends and another begins. In order to understand what makes each ecosystem unique, we need to look at the biotic and abiotic factors within them. Abiotic factors refer to non-living physical and chemical elements in the ecosystem. Abiotic resources are usually obtained from the lithosphere, atmosphere, and hydrosphere. Examples of abiotic factors are water, air, soil, sunlight, and minerals. Biotic factors are living or once-living organisms in the ecosystem. These are obtained from the biosphere and are capable of reproduction. Examples of biotic factors are animals, birds, plants, fungi, and other similar organisms. Comparison chart Abiotic Biotic Introduction In ecology and biology, abiotic components are non-living chemical and physical factors in the environment which affect ecosystems. Biotic describes a living component of an ecosystem; for example organisms, such as plants and animals. Examples Water, light, wind, soil, humidity, minerals, gases. All living things — autotrophs and heterotrophs — plants, animals, fungi, bacteria. Factors Affect the ability of organisms to survive, reproduce; help determine types and numbers of organisms able to exist in environment; limiting factors restrict growth. Living things that directly or indirectly affect organisms in environment; organisms, interactions, waste; parasitism, disease, predation. Affects Individual of a species, population, community, ecosystem, biome, biosphere. Individual of a species, population, community, ecosystem, biome, biosphere

2.) Forests play a vital role in Canada’s economic health, with the forest industry accounting for some 297,000 direct and indirect jobs. At the same time, forests also store carbon, preserve soils and nurture a diversity of species. These non-timber benefits are known as “ecosystem services.” Accounting for ecosystem services accurately in policy- and decision-making is a difficult task, especially when some have clearer dollar values than others. However, Canadians increasingly recognize the many ecosystem services that forests provide, and resource agencies are starting to assess and estimate forests’ economic, social and environmental values. The benefits provided by forest ecosystems include: • goods such as timber, food, fuel and bioproducts • ecological functions such as carbon storage, nutrient cycling, water and air purification, and maintenance of wildlife habitat • social and cultural benefits such as recreation, traditional resource uses and spirituality The primary challenge for sustainable forest management is finding ways to continue to benefit from ecological services without compromising the forest’s ability to provide those services.