

# Israeli Mutation of Palestinian Landscape

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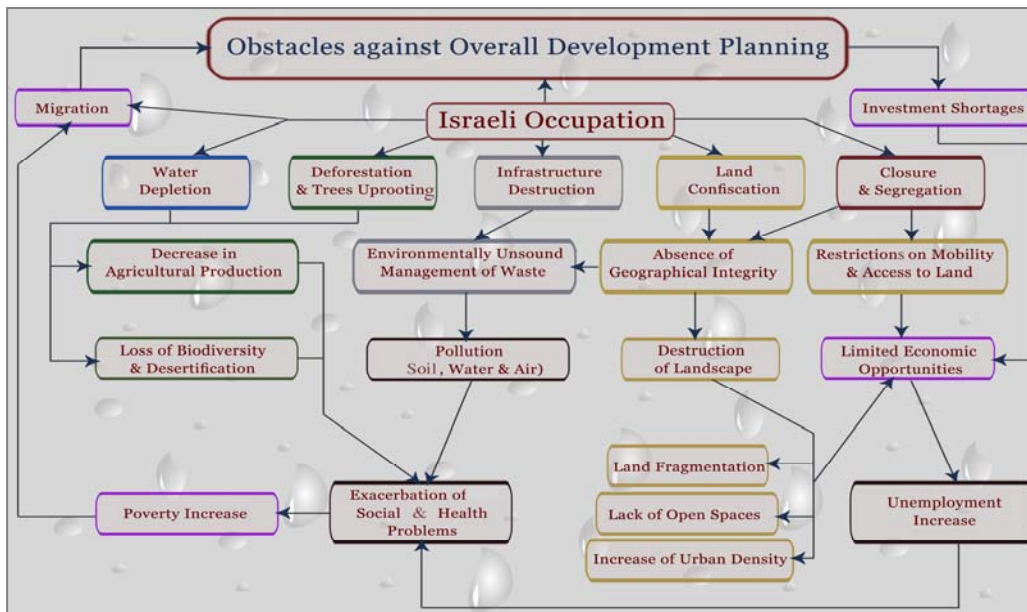
## **Introduction**

Palestine, as it stands today, consists of two physically separated land masses, the West Bank (including East Jerusalem) and Gaza Strip with a total area of 5,661 km<sup>2</sup> and 362 km<sup>2</sup>, respectively. Although small in size, its unique location at the crossroads of three continents has made Palestine an environmental melting pot for flora and fauna of Africa, Asia, and Europe. The once-fertile heights of Palestine have been denuded; barren lands and deserts have replaced forests and green plains. Desertification and soil erosion are evident, particularly in the Eastern Slopes of the West Bank. Polluted and salty water runs now in the Jordan River more than ever. The Dead Sea, which represent the deepest point in the world's, has sunk so low that it is now two separated seas and still dropping.

Palestine is characterized by the presence of two contradictory planning schemes that aim at exploiting its natural resources to serve two peoples: these are the endogenous Palestinian population and the Israeli settlers and army, which has been controlling the area since 1967. The fragile Palestinian environment has been the first casualty of this reality. It has been exposed to pressures ensuing from the practices of the Palestinian population, on the one hand, and from the practices of the Israeli Occupation, on the other hand, which have significantly contributed to changing the environmental features of the Occupied Palestinian Territory (OPT).

Lack of sovereignty over land and natural resources has denied the Palestinian people their rights to regulate land use and to manage the utilization of their own resources, without exceeding the carrying capacity of land. Without ability to regulate land use over a contiguous piece of land, natural ecosystems can not be maintained; the status of the environment can not be properly monitored; and environmental protection can not be implemented. On the other hand, the plans of the Israeli Occupation in the OPT have been geared by political factors, aiming at grabbing as much as possible of the Palestinian land to implement the Israeli colonizing strategy and to change the demographic characteristics. Thus, poor management, unsustainable practices as well as the activities of the Israeli Occupation has resulted in the radical transformation of the Palestinian environment and degradation of its natural environment and resources. Palestine's physical environment has been especially affected by unilateral policies conducted by the state of Israel to exploit and exert complete control over Palestine's natural resources for its own purposes

The case of the OPT strongly illustrates the often negative relationship between occupation and environmental degradation (Figure 1). All the facts indicate that the Palestinian environmental rights have been badly violated by the Israeli Occupiers specially during the so-called "peace process".



**Figure 1: The organic relationship existing between environmental degradation in the OPT and the Israeli Occupation**

### Transformation of the Palestinian landscape

In 1993, the PLO signed the Oslo Accords with the State of Israel, accepting just 22% of Historical Palestine as the basis for a Palestinian State. The "Oslo II" Interim agreement, signed in September of 1995, sets out the interim stage for Palestinian Autonomy in the West Bank and Gaza Strip, pending "final status negotiations" which were scheduled to begin in 1996 and end by 1999. The OPT was divided into Areas "A," "B," and "C," which designate varying levels of control (Table 1).

**Table 1: Areas definition in Oslo II Interim Agreement, September 1995**

	Area (km <sup>2</sup> )	%	Definition
<b>Area A</b>	1004.8	17.7	The Israeli army has pulled out fully and Palestinians hold all responsibilities for internal security and Public order
<b>Area B</b>	1035.4	18.3	Palestinians have full control over the civil administration and Israel continues to have overriding responsibility for security.
<b>Area C</b>	3456.4	61.1	The Palestinians have responsibility for civil life such as economics, health and education; however, Israel retains full control over security and administration related to territory
<b>Nature Reserve</b>	164.5	2	

The jagged distribution of areas "A", "B", "C", has scattered the OPT into isolated cantons, which are physically separated from each other and from the Gaza Strip, which was agreed to have a safe passage with the West Bank but the Israelis did not allow it to function as agreed at any time. Moreover, The issue of Israeli settlements existing in violation of international laws and United Nations Security Council

resolutions; along with the issues of borders, water, Jerusalem and the refugees' Right of Return were deferred to final status negotiations. However, construction of new Israeli settlements and expanding of existing ones have continued until now, ignoring Oslo agreement this is in addition to the boundary manipulation by Israel with the ongoing construction of the Segregation Wall.

The implementation of the Israeli colonizing activities in the OPT has accompanied by confiscation of thousand of dunums of Palestinian land. After signing the Declaration of Principles in 1993, the Israeli Occupation Forces (IOF) confiscated 642.6 km<sup>2</sup> of Palestinian land in the West Bank (ARIJ, 2010). Today 199 Israeli settlements are built on all over the West Bank, all of which have a total area of 189 km<sup>2</sup> (ARIJ GIS database, 2010). This excludes military complexes, closed military areas, and bypass roads. Master plans for these settlements, however, occupy a much larger area, amounting to 485 km<sup>2</sup> (8%) of the West Bank. In addition to that, in 1996, the Israeli settlers instigated a new phenomenon which later became known as “outposts”. It is simply identified as a group of Israeli settlers taking control of Palestinian hilltops located in close proximity to an existing Israeli settlement. According to ARIJ database there are 232 outpost’s locations in the West Bank. Moreover, The Israelis in their planning schemes focused on creating irreversible facts on the ground to put an end to any prospect of a viable Palestinian State to be established over the OPT. Among the irreversible facts are the bypass roads, which were constructed to link the Israeli colonies with each other and with Israel while circumventing Palestinian built-up areas. The following provides a description of the Israeli colonizing activities that represent the core of the Israeli planning schemes in the OPT.

<b>Item</b>	<b>Area (in km<sup>2</sup>)</b>	<b>Percentage (of total area of the West Bank)</b>
Settlements Master Plan	485	8%
Israeli Military Base	49	1%
Closed Military Area including parts declared nature reserve areas	999	18%
Bypass Roads	112	2%
Israeli Proclaimed Nature Reserve Areas*	417	12%
<b>Total of Occupied West Bank Area</b>	<b>2336</b>	<b>41%</b>

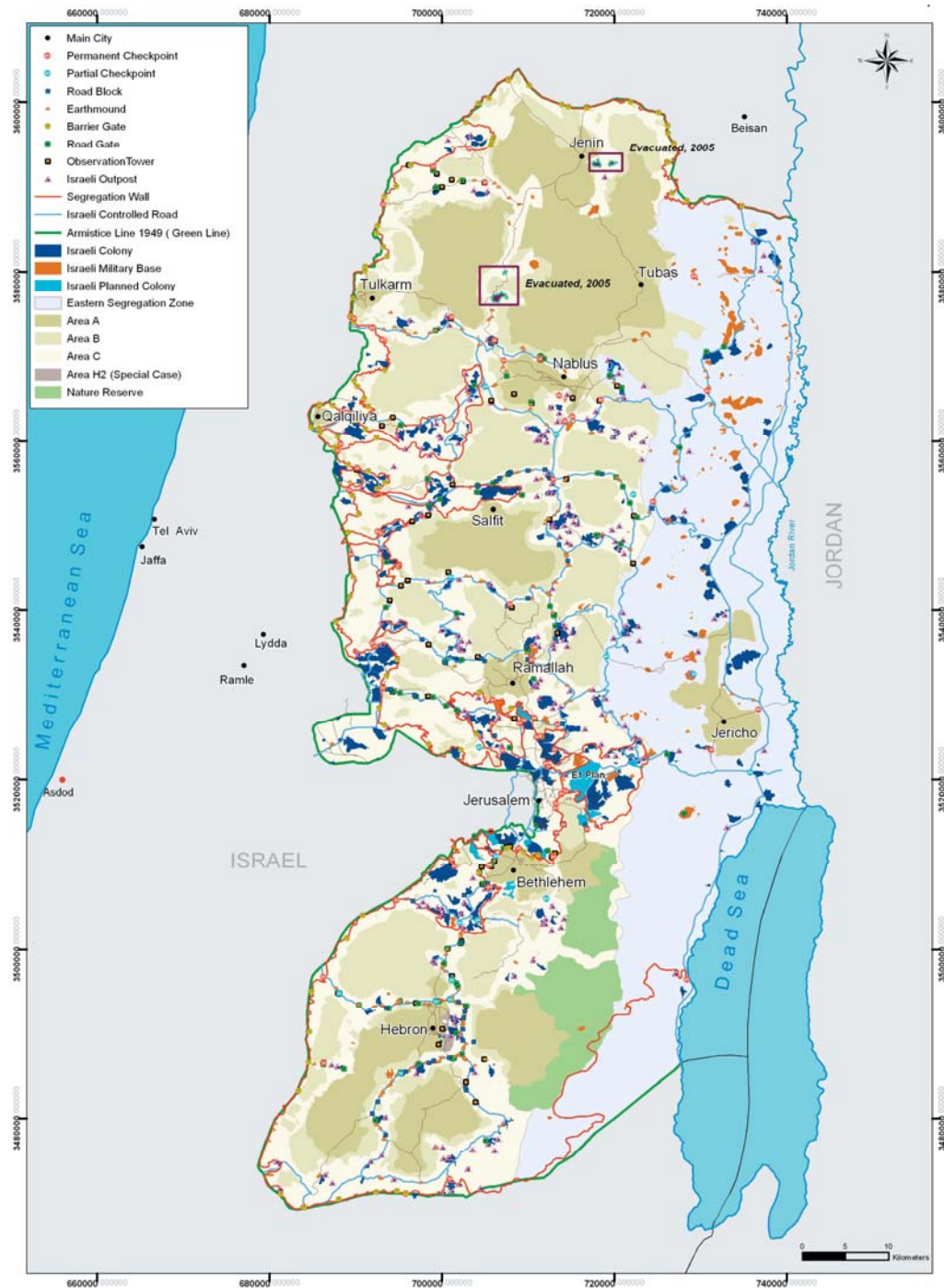
\* total area of which, 702 Km<sup>2</sup>

The incessant construction of Israeli colonies, bypass roads all over the Palestinian land has contributed to the segregation of the West Bank into 64 isolated areas. With slight adjustments to the Israeli Security Zone Plan, the Israeli Authorities started on June 2002 its policy of unilateral segregation within the OPT by establishing a Segregation Zone along the western terrains of the occupied West Bank Map 1. The Israeli Segregation Zone covers substantial sizeable and significant land areas, rich with natural resources as it runs along through the western part of the West Bank from north to south grabbing the most fertile agricultural lands, isolating Palestinian communities in enclaves, undermining the territorial contiguity between the Palestinian villages and cities, controlling the natural resources and encapsulating most of the Israeli settlements. Table 2 shows classification of isolated Palestinian land within the western Segregation zone. The fragmentation and segregation of Palestinian land have exacerbated the problem of geographical discontinuity with the Palestinian Territories

and limited the possibility of achieving comprehensive development planning in them. (ARIJ, 2003)

**Table 2: Western Segregation Zone (733 km<sup>2</sup>) Land use/ Land cover**

Item	Area/ km <sup>2</sup>	percentage
Agricultural Land	348	47.5
Israeli settlements & military bases	110	15
Forest and open space areas	250	34
Palestinian built-up area	25	3.5

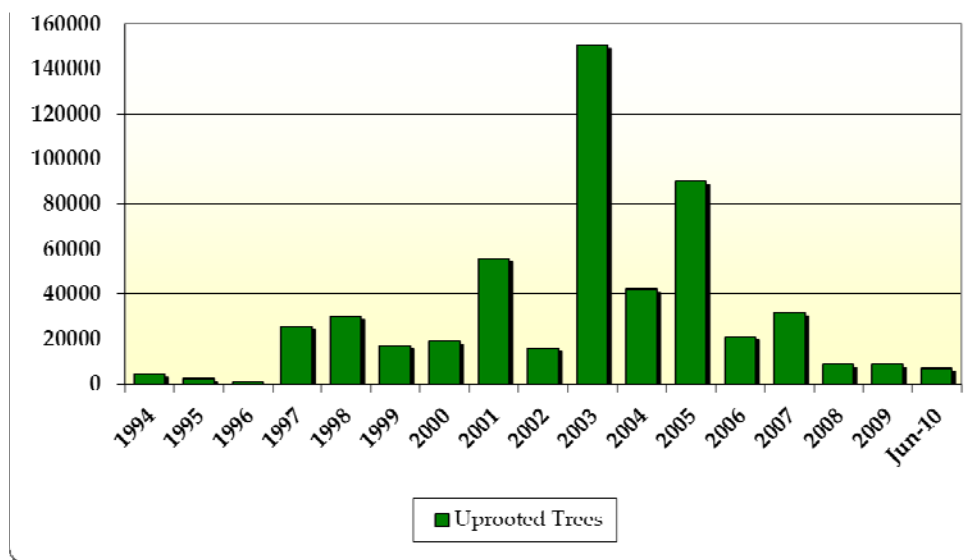


**Map 1: Geo-Political status of the Occupied Palestinian Territory, 2010**

In parallel, Israel has created a de facto Eastern Segregation Zone along the eastern terrains of the occupied West Bank Territory. However, the Segregation Wall system does not apply there due to the physical characteristics of the area. Instead, a system of controlled access checkpoints was established along the Jordan Valley and the shores of the Dead Sea. This zone has a total area of 1,580 Km<sup>2</sup>, representing 28% of the West Bank, and includes 43 Israeli settlements and 42 Palestinian localities (Map1). As a result of these practices the Palestinians now have limited access to a large portion of the natural resources in the West Bank. Areas such as the Jordan Valley and the Eastern Slopes are considered as major natural resources of the region. Accordingly, it is evident that the Israeli Authorities continued and will continue implanting these exotic bodies in the OPT and confiscate lands on the count of the green spaces left for the Palestinians and their natural resources causing massive destruction to such lands and its resources and denying Palestinians the right to cultivate their lands and secure a constant source of income.

### Pressures on Biodiversity and Desertification

It should be noted that the Israeli activities have been accompanied by tree uprooting and razing of Palestinian lands which resulted in great losses in the agricultural sector. Figure 2 illustrate the number of the uprooted trees by the Israeli Occupation forces. Such decrease in woodland areas has definitely affected the number of PGRs growing as part of the forest system in the OPT.



**Figure 2: Number of Trees Uprooted by the Israeli Occupation Forces during the Period from 1994 to 2010 (ARIJ database, 2010)**

Concerns are also expressed over the potential impacts of the ongoing development of the segregation zone along the western and eastern parts of the West Bank. In view of the size of land confiscated from the West Bank, and the commensurately greater development pressures, the segregation zone is causing major challenges in conserving representative ecosystems, landscapes and habitat linkages especially between protect areas, and forests. The segregation zones pose a great threat to the biodiversity in the OPT due to the negative impacts on the movement of terrestrial fauna by adding further to the fragmentation of ecosystems and habitats in both Israel and the West Bank and by cutting the natural ecological corridors.

Furthermore, the segregation zones will be resulted in the fragmentation of the agro-ecosystems through isolating significant parts of these zones and annexing them to Israel including their valuable water resources, fauna and flora resources and the fertile lands. Habitat fragmentation as a result of the segregation wall acts as a physical barrier that may prevent many species of mammals to travel to their sources of food and mating which may endanger the survival of specific populations or creation of new sub-populations. Such an action will increase the probability of Palestinian natural heritage lose by impacting the existence of large number of plant and animal species growing and inhabiting this area which is already affected by other destructive practices causing the lose of valuable and irreversible resources.

The segregation zone also causes strip clearing of land including forest and other vegetation covers. Almost 49 forested areas are included in the segregation zones with a total area of 32916 dunums, forming 42.7% of the total forested area of the West Bank (ARIJ, 2010). This can exacerbate the long-term trend of degradation of planted and natural forests in the area. More than 31 protected areas are also included in the Israeli segregation zones, forming 71 % of its total area, where Palestinians cannot have access to, and not even for management purposes (ARIJ, 2010). This action will threat the existence of a unique natural vegetation covers through isolating such sites from their surrounding environments and their habitats in addition to the risk of threatening the plant species that grow naturally in the same area. The expected threatened vegetation cover in the eastern part of the segregation zone is characterized with a diversity of plant geographical territories.

Furthermore, the eastern segregation zone contains more than 80% of the Palestinian rangelands areas where the herders are usually taking their sheep and goats to graze. This will result in reducing the size of accessible grazing area and exposing the remained rangeland to overgrazing phenomena, accelerating land degradation, reducing the green cover biomass and grazing capacity and enhancing the desertification of that area. It is worth mentioning, the area where segregation zones take place, supports the growth of many important rangeland plants and wild relative species of herbaceous plants and trees, in addition to the wild species of fruit trees such as pear, pistachio. In the long run, such an act would also add to the risk of threatening the plant species that grow naturally in the segregation zones. The Western and Eastern segregation zones support large number of rare plant species, which ranges between 1 to 23 species and 1-7 species per 5 km<sup>2</sup>, in both segregation zones consequently (ARIJ, 2007).

### **Conversion of Palestinian land into a Dumping Site**

The practices of occupation and control used by the Israeli authorities have systematically impeded the development of Palestinians and damaged the environment in the process. The Israelis have focused on serving their interests in the OPT without paying any attention to the environment even during the peace process when both parties agreed to cooperate and share the responsibility in all areas of environmental protection. The Israelis have never complied with the actions and measures recognized in Article 12 of Annex III to the Oslo II Accord to protect the environment. For instance, it was agreed that both sides should take all necessary measures to ensure that activities in their respective areas do not cause damage to the environment of the other side (Israeli Ministry of Foreign Affairs, 1995). However, this has never been followed by the Israelis who have persisted on using the Palestinian land as a dumping site for their solid and hazardous waste as well as wastewater as follows: 1) About 80% of the

solid waste generated by the Israeli colonists living in the West Bank is dumped in dumping sites located within the West Bank; 2) Construction of their own solid waste dumping sites in the West Bank such as Tovlan site that was established in the Jericho governorate; 3) Illegal movement of hazardous waste from Israel to the OPT; and 4) Most of the colonists allow the generated wastewater to flow untreated into nearby wadis and Palestinian agricultural lands (Isaac, Jad. et al., 2005).

The construction of the Segregation Wall which has further intensified the absence of geographical continuity within the OPT has exacerbated the solid waste management problem. The existing dumping sites that are located outside the Wall have become inaccessible to the localities that are enclosed inside the Wall causing the use of emergency disposal sites inside the localities and increasing the solid waste load to the existing dumping sites. The Wall represents a physical impediment towards implementing any proposed centralized solid waste and wastewater management project that aim at serving a whole district or a cluster of localities. In this respect, lack of sovereignty over land denies the Palestinians from their right to plan and implement environmental projects in Area C which is fully controlled by the Israelis and even in Area B. They have to obtain permits from the Joint Environmental Experts Committee or/ and from the Water Joint Committee and the District Civil Liaison. However, permits were never obtained as the Israelis have been given a veto over the Palestinian decisions.

### **Depletion of Water Resources**

In spite of the availability of fresh water resources in the OPT from two major sources which are surface water resources represented by the Jordan River and groundwater resources, the Palestinian water rights have been violated by Israel. As regards to the Palestinian water rights in the Jordan River, the Palestinians who are riparians have been deprived of their right in the Jordan River since the Israeli occupation in 1967. Until the 1950's, the Jordan River had an annual follow of 1320 MCM discharging into the Dead Sea. Today only 50 MCM of high salinity and deteriorated quality water ends up as surface water urn-off into the Dead Sea, due to the Israel's unilateral diversion of the Jordan River waters to the Neqeve and other diversion projects. Moreover, the surface area of the Dead Sea has shrunk by about 30% in the last 20 years.

Groundwater resources have become the major source of fresh water supply to Palestinians. Since the Occupation, Israel has been restricting Palestinian water usage and exploiting Palestinian water resources. Israel is exploiting about 80% of the annual safe yield of the groundwater basins in the West Bank to meet 25% of its water needs, whereas the water quantity consumed by Palestinians constitutes around 20% of the annual safe yield. As a result of the Israeli water policy and practices in the OPT, the total amount of water available to approximately 2.4 million Palestinian inhabitants in the West Bank is 105.9 MCM for their domestic, industrial and agricultural needs. For comparison, the total amount of water available to approximately 7.1 million Israelis is 1408.6 MCM. In addition, Israel had the use of further 277 MCM of brackish water and storm water and 450 MCM from non-conventional water from wastewater treatment and desalination (World Bank, 2009). On a per-capita basis, water consumption by Palestinians is approximately 73 liters per capita per day (l/c/d) compared to about 300 l/c/d for Israelis. In other words, the per-capita consumption in Israel is 4 to 5 times higher than the Palestinian per-capita consumption in the OPT. If the this per-capita figure is taken into consideration, it will be easily noticed that this

figure forms only about one-fourth of what is recommended by the World Health Organization (WHO). It should be added here that the 580,000 Jewish settlers consume on average 369 L/c/d, While Palestinians are struggling to connect the remaining 26 % of the Palestinian communities to the water network. It is worth mentioning that the Palestinians in the rural communities in the West Bank survive on far less than even the average 70 Liters; in some cases the per capita water use may not exceed 20 liters per day.

Moreover, restrictions imposed by Israeli authorities on Palestinian movement and access including the segregation wall, checkpoints, and closed military areas introduce real obstacles to Palestinian management and development of their water resources. The construction of the segregation wall has resulted in the isolation of 29 wells with an annual discharge of 5.5 MCM. In the Eastern segregation zone, there are around 165 artesian wells and 53 springs with an annual discharge of 55 million cubic meters are used by Palestinian living in localities located within this area. The Israeli policy and practices including the Israeli civil administration rules, and the Israeli military and security directives have collectively resulted in cutting the Palestinians off from their water supply wells or at least imposing more restrictions on the use of such wells and exacerbating the water problem in the Palestinian Localities.

## **Conclusion**

The Israeli occupation has contributed to changing the environmental features of the OPT through the strict control over Palestinian land; land confiscation for implementing the Israeli colonization policy and unilateral segregation plan; as well as the exploitation of water resources to serve the Israelis and the Israeli colonists who are illegally living in the OPT. All these practices have served to deteriorating the Palestinian environment. Therefore, it is of a great urgency that the international communities cooperate with the Palestinian to add pressures on the Israeli Occupation Authorities in order to cease the violations against the Palestinian environment and residents.

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