
SUMMARY



Green Belt Management Strategy in Consideration of Metropolitan Spatial Structure

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1. Changes in Green Belt Adjustment Policy

First initiated to honor an election pledge by President Kim Dae-Jung and address issues of constitutional discordance concerning Article 21 of the Urban Planning Act (1971), adjustments to Green Belts - known in legal terms as Development Restriction Zones - over the past 17 years have been carried for mitigation inconveniences to residents in Green Belts and supplying urban land based on environmental assessments of Green Belts and urban planning systems. In view of the spatial characteristics of Green Belts, which are designated for entire city regions, a ‘metropolitan planning’ has been formulated to assign “maximum area released from Green Belts” by city and city region, and cancellation of Green Belt designation has only been permitted in accordance with strict criteria for cases of public development involving a

recognized need for usage as urban land in each metropolitan area.

Since the 1999 announcement of basic principles for Green Belt adjustment, institutional implement measures by the central government have focused chiefly on (1) increasing the maximum area released from Green Belts and permissible project types implemented in the areas released from Green Belts, (2) activating the management of clustered villages released from Green Belts, and (3) promoting projects within the areas released from Green Belts through involving private sector. As a result, some have argued that economic and environmental consideration have been prioritized in the cancellation process of Green Belt designation over the urban growth management role that the system performs in urban planning terms.

2. Issues of Green Belt Policy in Terms of Urban Growth Management

Current policies for Green Belt adjustment have some issues in terms of urban growth management. First, their rigidity in failing to allow for flexible adjustments to boundaries with urban growth (as with the Urban Growth Boundary system in the U.S.) has resulted in leapfrog development beyond the DRZ' boundaries in some metropolitan areas. Second, while Green Belt adjustments have been implemented and carried out through the formulation of a 'metropolitan planning' to assign maximum area released from Green Belts, the lack of sectional correspondence between the section of "Green Belt adjustment" with the section of "metropolitan spatial structure schemes" or "metropolitan land use plan" has led to a failure to manage the Green Belts in consideration of metropolitan urban structure, as was the initial aim when the Green Belt system was introduced. Third, while some local governments in the Seoul and Busan Metropolitan Areas have requested additional allocation of

maximum area released from Green Belts, other metropolitan areas have exhibited a low rate exhaustion of their assigned maximum area released from Green Belts, suggesting limitations the current approach of adjusting Green Belts through the maximum area released from Green Belts. Fourth, release from Green Belts for small-scale sites, such as clustered villages with 20 or more households where public services are difficult to supply has resulted in inefficient metropolitan spatial structure with scattered small residential area within Green Belts. Finally, increasing urban sprawl within and outside of complete Green Belt removal areas - most notably Green natural areas - suggests that a management approach involving replacement to the current zoning system would be premature.

3. Current Conditions and Characteristics of Green Belt Adjustment by City Region

As of late 2016, approximately 29% (1,543 sq. km) of the 5,937 sq. km in Green Belts initially designated in the 1970s had been released from Green Belts. By the early 2000s, 1,103 sq. km of Green Belt area for seven city regions deemed as having little need for designation was completely removed in their city region. In seven metropolitan areas where Green Belts have been adjusted partially, approximately 440 sq. km of area has been converted for provision as urban land, chiefly as residential and industrial complexes.

To begin with, demand for release from Green Belts to provide urban land is low for Daegu, Gwangju, Daejeon, Ulsan and Changwon Metropolitan Areas besides Seoul and Busan Metropolitan Area, which face high development pressures and shortages of available land. The intensifying shortage of available land in the Seoul Metropolitan Area has resulted in the increasing use of Green Belts for housing. In Busan Metropolitan Area, Green Belt area in the

Gangseo-district has been released for a large-scale development effort in the Busan-Jinhae Free Economic Zone and Busan Eco-Delta City waterfront development project, and a portion has been designated as an industrial complex to address a shortage of industrial land. Green Belts have also released in other five metropolitan areas since the 2000s to supply a public housing complex, although no such instances have occurred in the 2010s.

Of five small city regions - Chuncheon, Cheongju, Jeonju, Jinju and Jeju region - where Green Belts were completely removed in the early 2000s, residential complex designation has occurred only internal to former Green Belts (built-up areas) since the 1980s; in the cases of Jeonju and Jeju regions, no residential complexes have been designated within their city region since Green Belts were completely removed in their city region. As the rate of population increase slows for these five city regions, no residential complex designation or other large-scale development is predicted to occur in the future. Their populations are continuing to increase, however minimally, and residential complex is expected to continuing expanding to former Green Belts amenable to relatively individual development (building permission) in Green natural areas and the outside of former Green Belts (e.g. Planned control areas). Individual development for industrial uses is also growing for Green natural areas and Planned control areas in particular, taking advantage of their relative amenability to footloose location establishment through development activities.

4. Impact of Green Belts on Urban Sprawl to Evaluate Effectiveness in Terms of Urban Growth Management

To estimate sprawl levels, the compactness index (CI) has been developed to cover both population and employment densities. An increasing CI value indicates a decreased sprawl level. We compare the influence of Green Belts on

sprawl levels between five small city regions where Green Belts were completely removed in the early 2000s and the seven metropolitan areas that have kept the Green Belt system. In addition, impacts are compared among 2001 (before removal), 2007 (immediately after removal), and 2013. The results show that the level of urban sprawl increased in the five small city regions where Green Belts were completely removed, while the compactness levels in the other metropolitan areas keeping Green Belts increased. In addition, the influence of Green Belts was larger near central business district (CBD) areas than urban fringe areas. In some city regions, Green Belts are associated with increasing leapfrog development, but those in most city regions are not closely connected to leapfrogging issues.

5. Reinforcing Urban Growth Management Role of Green Belts

Reinforcement of the urban growth management role of Green Belts will require the establishment of three basic principles for operating the Green Belt system: (1) improving competitiveness of metropolitan area by increasing the value of internal to areas designated as Green Belts (built-up areas), (2) permitting conversion to urban land according to growth management principles when inevitable demand for cancellation of Green Belt designation, and (3) designating and managing Green Belts to expand open land within metropolitan area.

As institutional improvements to reinforce the urban growth management roles of Green Belts, the urban growth management concept should first be reinforced so that in instances where shortage of available land in metropolitan areas inevitably leads to the use of Green Belts for urban land supplies, the priority use of existing urban land internal to areas designated as Green Belts

(built-up areas) and contiguous area is encouraged as much as possible. Second, regulations mandating district-unit plan formulation when small-scale sites such as clustered villages or land remnants are released from Green Belts to address resident complaints should be abolished, and up-zoning should be permitted on the condition that maintenance projects are implemented. Finally, separate Green Belt adjustment terms in the National Land Planning and Utilization Act and the Green Belt Act should be integrated into the Green Belt Act system in order to provide comprehensive terms concerning maximum area released from Green Belts and criteria for cancellation of Green Belt designation through a 'Green Belt management plan'.