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Title:

**The use of GIS in waste management: case of the
City Sétif “Chouf Lekdad-El Bez”**

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Abstract

The problem of waste is one of the most important and prominent contemporary environmental concerns facing the world, especially developing countries, due to the rapid population and demographic growth and the emergence of new patterns and behaviours, which has led to an increase in the volume of waste produced and its quality, especially in cities, thus becoming one of the main challenges in terms of management and decision-making. Among the Algerian cities that suffer from this phenomenon and its mismanagement, we took the city of Sétif and in particular the Chouf Lekdad-El Bez neighbourhood, because it suffers from the phenomenon of waste spreading in a way that draws attention within the public sphere, so this study aimed to identify the types, characteristics and side effects of waste and the administrative and technical aspects of collection methods, and this study also aims to analyze the current spatial distribution of waste collection containers and better planning of the sizes and locations of containers in accordance with the population and the amount of waste produced using Geographic Information Systems in improving aspects and stages, and the qualification of human resources to be able to deal with modern technologies and preparation of strategic plans representing a comprehensive database on scientific bases.

Key words

Waste management, Geographic Information System (GIS), sector, waste, waste container.

Résumé

Le problème des déchets est l'une des préoccupations environnementales contemporaines les plus importantes et les plus importantes aux quelles le monde, en particulier les pays en développement, est confronté, en raison de la croissance démographique rapide et de l'émergence de nouveaux modèles et comportements, ce qui a entraîné une augmentation du volume de déchets produits et sa qualité, en particulier dans les villes, devenant ainsi l'un des principaux défis en termes de gestion et de prise de décision. Parmi les villes algériennes qui souffrent de ce phénomène et de sa mauvaise gestion, nous avons pris la ville de Sétif et en particulier le quartier Chouf Lekdad – El Bez, car il souffre du phénomène de propagation des déchets d'une manière qui attire l'attention dans la sphère publique, donc cette étude visait à identifier les types, caractéristiques et effets secondaires des déchets et les aspects administratifs et techniques des méthodes de collecte, et cette étude vise également à analyser la répartition spatiale actuelle des conteneurs de collecte des déchets et à mieux planifier les tailles et les emplacements des conteneurs en fonction de la population et de la quantité de déchets produits en utilisant le Système d'information géographique dans l'amélioration des aspects et des étapes, et la qualification des ressources humaines pour pouvoir faire face aux technologies modernes et la préparation de plans stratégiques représentant une base de données complète sur des bases scientifiques.

Mots clés

Gestion de déchets, Système d'Information Géographique (SIG), secteur, déchets, conteneurs à déchets.

الملخص

تعد مشكلة النفايات أحد أهم وأبرز الانشغالات البيئية المعاصرة التي تواجه العالم خاصة الدول النامية بسبب النمو الديمغرافي المتسارع وظهور انماط وسلوكيات جديدة الامر الذي أدى إلى زيادة حجم النفايات المنتجة ونوعيتها خاصة في المدن وبذلك أصبحت واحدة من التحديات الرئيسية فيما يتعلق بالادارة واتخاذ القرار. ومن بين المدن الجزائرية التي تعاني من هذه الظاهرة وسوء إدارتها، أخذنا مدينة سطيف وبالاخص حي شوف لكداد الباز لما تعانيه من ظاهرة انتشار النفايات بشكل يلفت الانتباه داخل المجال العمومي لذا هدفت هذه الدراسة الى التعرف على انواع وخصائص والاثار الجانبية للنفايات والجوانب الادارية والتقنية المبنية لاساليب جمعها، كما تهدف هذه الدراسة الى تحليل التوزيع المكاني الحالي لحاويات جمع النفايات والتخطيط الافضل لاحجام ومواقع الحاويات بما يتلاءم مع عدد السكان والنفايات المنتجة وذلك باستخدام نظم المعلومات الجغرافية في تحسين ادارتها وتسييرها بشتى جوانبها ومراحلها، وتأهيل الموارد البشرية ولتصبح قادرة على التعامل مع التقنيات الحديثة وإعداد خطط استراتيجية تمثل قاعدة بيانات شاملة على أسس علمية

الكلمات المفتاحية

تسيير النفايات , حاويات النفايات, النفايات, نظام المعلومات الجغرافية , قطاع.

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