



**IZMIR**  
**TURKEY**

**FOOD SYSTEM  
SUSTAINABILITY  
ASSESSMENT**

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Written by Let's Food

# CONTEXT AND OBJECTIVES

## CONTEXT

- In a world with limited resources and an ever-increasing population, food is an essential issue. The transition to more sustainable and equitable agricultural and food practices - essential for the survival of biodiversity and adaptation to global warming - must be considered both locally and globally. Strengthening sustainable food is a challenge that must be approached in a systemic way, considering all the components and actors of food systems. Local authorities and governments must seize this transition to build food-producing territories with the actors of the food system and thus guarantee access to quality food for all.
- Although cities around the world are gradually taking up the food issue and are increasingly communicating on the public, private or associative actions underway, there is still little information on public policies and local initiatives in favour of sustainable food systems in Mediterranean cities.

## LET'S FOOD

- Let's Food is a French based NGO aiming to support territories in building sustainable and resilient food systems through territorial cooperation and the exchange of good practices at local, national and international levels.
- The NGO has 3 specific objectives:
  - Support the development of sustainable local food policies in France and across the world.
  - Promote and operationalise the sharing of knowledge and initiatives among the different actors of the food system in order to accelerate a food and agroecological transition on a global scale.
  - Raise awareness and provide training on territorial sustainable food systems in order to strengthen the skills needed to set up sustainable food policies.

## ZOOM: ASSESSING THE SUSTAINABILITY OF A FOOD SYSTEM

The French NGO Let's Food has developed a methodology to analyse the sustainability of a food system. This is based on Nicolas Bricas' definition built from the definitions proposed by the FAO, Bioversity International and IPES Food (2015):

"Sustainable food systems:

- Protect the environment without depleting non-renewable resources and biodiversity and without polluting ;
- Provide access for all to sufficient, safe, nutritious and culturally acceptable food;
- Are based on an inclusive economic system that creates jobs for all and reduces inequalities of power for a fair distribution of added value;
- Promote social cohesion and respect for diversity;
- Restore confidence in the system and allow citizens to participate in its evolution".

The proposed methodology aims to analyse the connections within the value chain in the light of the dimensions of sustainable development in order to identify the main challenges.

# IZMIR

## TURKEY

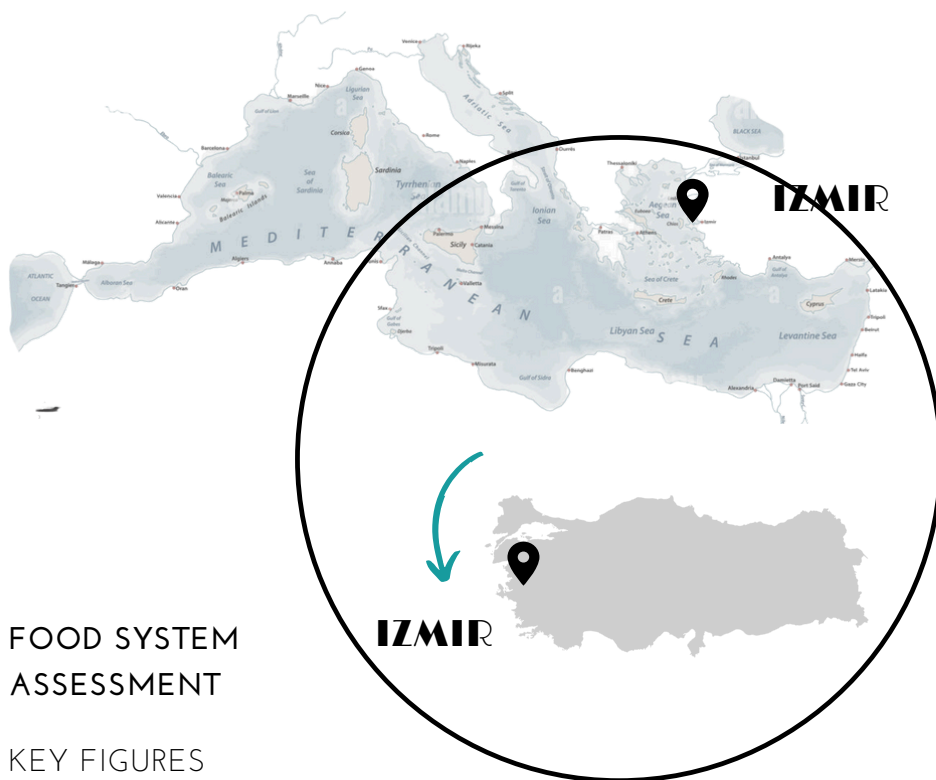
- 84 680 273 inhabitants (1) in an area of 783 562 km<sup>2</sup> (2) in 2021
- Presidential unitary republic led by Recep Tayyip Erdogan (AKP, Justice and Development Party)

## PIZMIR PROVINCE

- 4 394 694 inhabitants (3), 11 973 km<sup>2</sup> (4)

## IZMIR

- 965 900 inhabitants (5) in an area of 919 km<sup>2</sup> (6) in 2021
- Mayor: Tunç Soyer (CHP, Republican People's Party)



## FOOD SYSTEM ASSESSMENT

### KEY FIGURES

Izmir is located on the Turkish Aegean coast, facing the Greek islands. Today it is the third largest city in Turkey, after Istanbul and Ankara. It is also one of the richest cities in Turkey with a GDP per capita of approximately \$10,663 in 2019 (7). Due to its geographical position, Izmir is a commercial nerve centre of Turkey, whose Mediterranean climate also benefits traditional Mediterranean diet: olives, fish, cereals, fruits, etc. (8)

## I. Local interest to combat bad eating habits by returning to local food

*We have targeted 4 issues: food autonomy and resilience of the territory, physical, economic and cognitive access to quality food.*

- Turkish men with obesity: 21.5% (2017) (9),
- Turkish women with obesity: 35.9% (2017) (9),
- Share of national population with diabetes: 21.6% (2017) (9),
- Share of Turkish population living below the poverty line (\$4.3 (€3.59) per day per person): 13.9% (32).

In Izmir, the traditional diet consists mainly of fish and cereals. The opening of Turkey's markets to international trade in the 1950s with the arrival of the multinational Migros (11) contributed to the introduction of new products rich in sugars, salts and fats. Furthermore, Turkey has experienced high inflation since the 1960s, which reached 85% in 2022 (12). This price increase directly impacts the population's ability to access quality food: households are turning to cheaper products with low nutritional value (13). This may partly explain the sharp increase in the prevalence of obesity and diabetes in recent years (9). The food supply is dense in Izmir, with many markets, grocery shops and mini-markets (14). Izmir has been self-sufficient for a long time (16), as the surrounding land is fertile and suitable for the production of basic commodities. With the opening up to international markets, Izmir specialised in exports (cherries, lemons, lentils, tobacco, olive oil, hazelnuts...), to the detriment of local food. However, the metropolitan municipality of Izmir, through its programme entitled "Another agriculture is possible" wishes to localise its food through targeted financial aid favouring certain productions adapted to local demand and soil and climate conditions.

Various initiatives have been launched to facilitate access to quality and healthy food: awareness-raising in schools (gardening and cooking), banning the sale of snacks in schools (national initiative), distribution of meals to the most precarious (Izmir Metropolitan Municipality).

## II. Specialised agriculture for export

We have targeted 3 issues: agricultural and food production, food processing and food distribution.

- Main agricultural productions in Izmir: cotton, tobacco, olive oil, grapes and figs (17),
- Surface dedicated to agriculture in Izmir Province: 28% (18),
- Share of employment devoted to agriculture in Izmir Province: 24% (2018) (19) (19.2% at national level) (19),
- Average size of a farm in Izmir Province: 3.7 ha (2011) (12) (3 ha at national level (20)),
- Share of Izmir Province in national aquaculture production: 22% (20),
- Contribution of Izmir region to national agricultural GDP: 7% (20).

The province of Izmir provided almost 25% of the country's agricultural production in 2009 (20). Agriculture in the province is still represented by small family farms (31) producing fruit, vegetables, cereals, milk and meat. Agricultural and livestock production accounts for 24% of Izmir's exports. Farmers often work in co-operatives: there are about 310 agricultural and fisheries co-operatives in Izmir province, 287 of which are in the perimeter of the metropolitan municipality (33) (19). The average monthly salary of a farmer in the province of Izmir remains low and does not allow for a decent living from this activity: about 3379 TL per month or 166.09 €. The national average in agriculture is 3563 TL/month or 175.25 € (21). For comparison, the average salary in Turkey is 743.64 € (22).

On a national scale, while in the 1950s agriculture accounted for 50% of GDP, it accounted for only 8% in 2016 (23). Turkish agricultural production is mainly export-oriented, making Turkey dependent on imports for its food (20). The agri-food sector is expanding rapidly: food retailing is estimated to have grown by an average of 13% per year between 2013 and 2015 (24). The Izmir region is increasingly exporting specialised products and massively importing other products from the rest of Turkey and abroad. However, globalisation is making food chains more complex and multiplying intermediaries: 96% of food sold in Izmir markets is sold through intermediaries (25) (18). The multiplication of intermediaries is to the detriment of the producer and the income he can hope to earn from his production.

The Metropolitan Municipality of Izmir is the first to have created a department dedicated to agricultural development in 2014. Thus, it helps small rural producers through ambitious actions to support cooperatives: subsidies for the purchase of agricultural equipment, provision of a soil analysis service, subsidies for the modernisation of irrigation techniques, connection with direct sales outlets, direct purchase of products from cooperatives to supply food aid, etc (31). In addition, the municipality of Izmir provides additional financial support to dairy farmers to remain competitive with products from the European market (26).



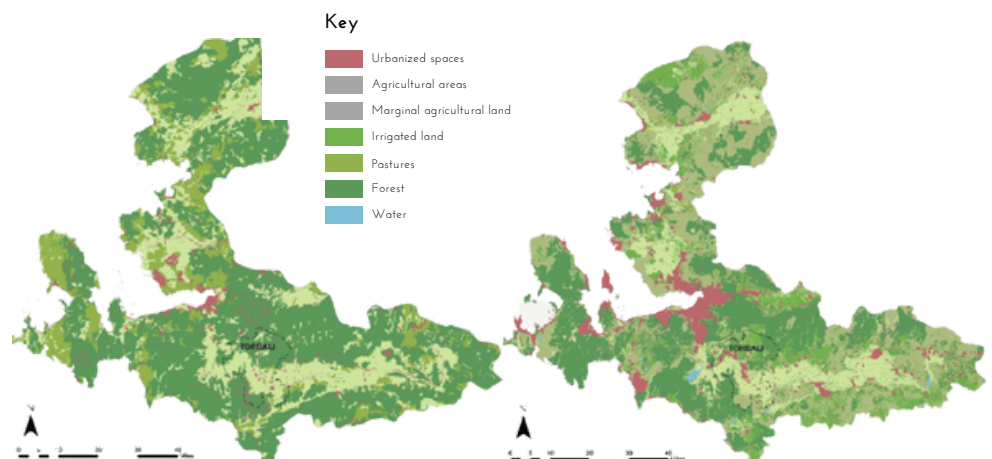
A. SELIM ALPASLAN

"Agriculture is a strategic sector for Turkey and for Izmir in particular: in the metropolis of Izmir, we have been able to preserve our agricultural know-how and even today a significant part of the population lives from agriculture. The COVID-19 health crisis demonstrated the importance of local agriculture: we did not suffer any disruption in supply. Our agriculture is adapted to our local consumption habits and vice versa thanks to our strategic food planning".

A. Selim Alpaslan, Project Manager, Agricultural Projects Directorate, Izmir Metropolitan Municipality

Land cover in the territory of Izmir in 1984

Land cover in the territory of Izmir in 2013





UMUT  
DILSIZ

"Agriculture in Izmir is responsible for a variety of impacts on natural resources: depletion of soil quality due to predominantly intensive agriculture, drying up of surface and deep water reserves, water pollution, increase in marine pollution, greenhouse gas emissions or consumption of agricultural land due to rapid urbanisation. The agricultural sector is also the first victim : agriculture negatively impacts the resources on which it directly depends for survival".

UMUT DILSIZ,  
Director, SÜGEP Academy

## COMPETENCES

### Izmir Municipality:

- Agricultural development
- Social action and health
- Territory Development

## III. Water resources threatened by pollution and global warming

We have targeted 3 issues: agricultural and food production, food processing and food distribution.

- Share of irrigated agricultural land in the Izmir metropolis: 58% (31);
- Contribution of agriculture to total greenhouse gas emissions in the Izmir region: 8.2% (2019) (27);
- Food waste along the value chain in Turkey: 5% to 20% (2013) (19);
- Area dedicated to organic farming in Turkey: 89,827 hectares in 2002 (0.4% of the agricultural area) compared to 702,909 hectares in 2012 (3%) (17).

Agriculture is subject to the impacts of climate change and in particular to increasingly frequent episodes of drought and flooding. The metropolis is very dependent on water, with 58% of its agricultural land irrigated (31). Irrigation systems are not very economical (19) and reduced rainfall in winter and flooding in summer weaken production (28). In Izmir, the agricultural sector is mainly represented by intensive agriculture dependent on chemical inputs (pesticides and fertilisers - on average 150 kg of fertiliser/ha in the Izmir Region). The consequences for natural resources are clear: pollution of surface and ground water, depletion of biodiversity and soil (on average, in Turkey, soils are composed of 0.7% organic matter compared to about 5% in the European Union (31)). Moreover, agriculture in the region contributes 8.2% to total greenhouse gas emissions and therefore has a direct impact on air quality (29).

However, in recent years there has been a growing interest in organic farming. In the province of Izmir, between 2004 and 2019, the volumes of organic food produced have doubled. However, this is still small compared to other provinces in the country: Izmir contributes 3.3% of the national organic production (19).

The state has set a target to reach 5% of agricultural land dedicated to organic farming by 2023 (compared to 3% in 2012). To achieve this, it has set up a system of financial aid for organic farms. In addition, other actions are carried out locally to promote sustainable production systems. For example, the municipality promotes agro-pastoralism through mixed production systems to favour organic fertilisation and limit soil erosion (19), or tries to set up wastewater collection and treatment facilities to recycle water and thus reduce dependence on rainfall for agriculture (19). Bio-waste from households and businesses is neither sorted nor recycled. In 2020, 90% of waste (including bio-waste) ended up in landfills (29).

## IV. Dynamic food governance focusing on supporting local farmers

We have targeted 4 issues: Place of food issues in the political agenda, participation of all in decision making processes, social cohesion and territorial cooperation.

- A department dedicated to agricultural development within the Izmir Metropolitan Municipality,
- "Another agriculture is possible": an ambitious action programme carried by the Metropolitan Municipality.

In 2014, the Izmir Metropolitan Municipality was given the competence of agricultural development: it thus became the first municipality in Turkey to create a dedicated department. From then on, Mayor Tunç Soyer wanted to make agriculture a vector of sustainability for the territory by initiating the programme entitled "Another agriculture is possible". The metropolitan municipality is carrying out various actions to support small local producers and accompany the transition to a sustainable food system: capacity building, financial and technical aid, opening of sales outlets for products from local cooperatives, purchase and distribution of local milk to the city's children, purchase of products from cooperatives to meet the needs of food aid, opening of "seed centres" to raise awareness of agriculture among young people, modernisation of irrigation techniques, opening of composting centres, etc. The food ecosystem is also marked by the commitment of universities, companies, associations and cooperatives towards this common goal. However, there are still no tools that allow for the coordination of actions and the participation of all in the decision-making process. The metropolitan municipality is sharing its experience with other Turkish municipalities on different occasions, and also with other cities in the world through Izmir's participation in different networks (ICLEI) (31).

## A FEW INITIATIVES FOR SUSTAINABLE URBAN FOOD SYSTEMS

### "MILK FOR CHILDREN" - IZMIR MUNICIPALITY

- Purchase of milk from farmers involved in sustainable agriculture at twice the price of the conventional market,
- Distribution to children aged 1 to 4 in Izmir schools.

### SUPPORT TO FARMERS AND COOPERATIVES - IZMIR MUNICIPALITY

- Dedicated department for agriculture since 2014.
- Purchase of equipment, subsidies to farmers, creation of marketing opportunities, soil analysis, improvement of irrigation techniques, etc.

### AGRICULTURE DEVELOPMENT CENTRE - IZMIR MUNICIPALITY

- Research centre dedicated to the testing of climate change resilient production systems.
- Open to the public to raise awareness.

### 'DON'T WASTE MY ENERGY' PROJECT - UNIVERSITIES OF IZMIR AND ZURICH

- Spreading knowledge about sustainable food among university staff and students.
- Has led to several small initiatives such as building organic gardens in schools.

### TERRA MADRE INTERNATIONAL FAIR - IZMIR MUNICIPALITY AND SLOW FOOD

- Terra Madre" gastronomic fair in September 2022.
- Concerts, culinary shows, conferences on sustainable global food supply chains.

### AGTECH7 PROGRAMME - ERASMUS AND YASAR UNIVERSITY

- 7 weeks of training to optimise the food system.
- Interventions of food companies and investors in the construction of agro-technological learning modules.

### ZEYTINCE ASSOCIATION - OLIVE ACADEMY

- Awareness raising, civic engagement and research activities.
- Issues addressed: natural, industrial and cultural heritage of the region, protection and enrichment of the agricultural and culinary heritage, especially concerning olive oil and its derivative products.

### ESSEDRA PROJECT - IZMIR MUNICIPALITY

- Valorisation of local artisanal producers in Izmir through the awarding of culinary prizes.

### NATURNORM ORGANIK TARIM - COMPANY

- Providing certified organic products to the food industry in several Turkish regions and the Izmir region.
- Technical and financial support to organic farmers.

### TRAMP KITCHEN MOVEMENT - ASSOCIATION

- "Food movement" involving all food actors in the city (restaurants, distributors);
- Creation of a database on Izmir's food ecosystem, mapping of production/consumption behaviours, sustainable food cultural centre.

## RESOURCES

1. Institut statistique de la Turquie, 2022. Résultats du système d'enregistrement de la population basé sur les adresses 2021 [Online]. Available at: <https://data.tuik.gov.tr/Bulten/Index?p=Adrese-Dayali-Nufus-Kayit-Sistemi-Sonuclari-2021-45500&dil=2>
2. Données mondiales, 2022. Turquie, données et statistiques du pays [Online]. Available at: <https://www.donneesmondiales.com/asia/turquie/index.php>
3. UGeo Turquie, 2020. Statistiques administratives de Turquie [Online]. Available at: <https://ugeo.urbistat.com/AdminStat/en/tr/demografia/dati-sintesi/izmir/41/3>
4. Wikipédia, 2022. Province d'Izmir [Online]. Available at: [https://en.wikipedia.org/wiki/%C4%B0zmir\\_Province](https://en.wikipedia.org/wiki/%C4%B0zmir_Province)
5. UGeo Turquie, 2020. Cartes, analyses et statistiques sur la population résidente [Online]. Available at: <https://ugeo.urbistat.com/AdminStat/en/tr/demografia/dati-sintesi/izmir/41/3>
6. Wikipédia, 2022. Izmir [Online]. Available at: <https://en.wikipedia.org/wiki/%C4%B0zmir>
7. Health US News, 2021. La nourriture turque et le régime méditerranéen [Online]. Available at: <https://health.usnews.com/health-news/blogs/eat-run/articles/turkish-food-and-the-mediterranean-diet>
8. Observatoire mondial de l'obésité, 2017. Données sur la Turquie [Online]. Available at: [https://data.worldobesity.org/country/turkey-219/#data\\_trends](https://data.worldobesity.org/country/turkey-219/#data_trends)
9. Institut des Data Turques, 2021. Résultats régionaux de l'enquête sur le revenu et les conditions de vie, 2021 [Online]. Available at: <https://data.tuik.gov.tr/Bulten/Index?p=Income-and-Living-Conditions-Survey-Regional-Results-2021-45582>
10. Journal Sciendo, 2013. Ondes courtes de diffusion des supermarchés en Turquie [Online]. Available at: <https://sciendo.com/pdf/10.2478/mgr-2013-0020>
11. Trading Economics, 2022. Taux d'inflation de la Turquie [Online]. Available at: <https://tradingeconomics.com/turkey/inflation-cpi#:~:text=Inflation%20Rate%20in%20Turkey%20averaged,percent%20in%20June%20of%201968>
12. Site officiel du Stockholm Center for Freedom, 2017. La liberté de la presse en Turquie [Online]. Available at: <https://stockholmcf.org/as-poverty-in-turkey-deepens-many-unable-to-afford-basic-necessities-says-izmir-neighborhood-association/>
13. Original Investigation, 2021. Niveaux d'activité physique dans la population turque pendant le confinement lié à la COVID-19: un accès Online - Étude d'enquête transversale [Online]. Available at: [https://cms.galenos.com.tr/Uploads/Article\\_48159/%C4%B0KSSSTD-13-98.pdf](https://cms.galenos.com.tr/Uploads/Article_48159/%C4%B0KSSSTD-13-98.pdf)
14. Journal Sciendo, 2013. Ondes courtes de diffusion des supermarchés en Turquie [Online]. Available at: <https://sciendo.com/pdf/10.2478/mgr-2013-0020>
15. USDA - Services agricoles étrangers, 2016. Secteur de la vente au détail de produits alimentaires en Turquie [Online]. Available at: [https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Retail%20Foods\\_Ankara\\_Turkey\\_12-13-2016.pdf](https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Retail%20Foods_Ankara_Turkey_12-13-2016.pdf)
16. WorldFood Istanbul, 2017. L'option saine, les aliments biologiques en Turquie [Online]. Available at: <https://worldfood-istanbul.com/Articles/the-healthy-option-organic-food-in-turkey>
17. RAHMANN G & AKSOY U (Eds.), 2014. "Dépendance vis-à-vis du commerce agricole en Turquie" au Congrès mondial de l'agriculture biologique à Istanbul en Turquie [Online]. Available at: [https://orgprints.org/id/eprint/23954/1/23954%20WC14\\_MM.pdf](https://orgprints.org/id/eprint/23954/1/23954%20WC14_MM.pdf)
18. Municipalité métropolitaine d'Izmir, 2022. La politique alimentaire et agricole d'Izmir à l'agenda de l'Europe [Online]. Available at: <https://www.izmir.bel.tr/tr/Haberler/izmir-in-gida-ve-tarim-politikasi-avrupa-nin-gundemine-giriyor/47355/156>
19. Bourse des matières premières d'Izmir (ICE), 2013. Économie d'Izmir et Agriculture à Izmir [Online]. Available at: <http://itb.org.tr/en/Page/53-economy-of-izmir-and-agriculture-in-izmir>
20. Panos Chamakiotis - Directeur régional EMEA (Europe, Moyen-Orient et Afrique au Compo Expert Groupe), 2016 [Online]. Available at: <https://panoschamakiotis.medium.com/agriculture-in-turkey-eastern-of-europe-or-the-biggest-southeast-european-land-61b99da0739e>
21. Institut des Data Turques, 2022. Structure des salaires du travail des exploitations agricoles, 2020-2021 [Online]. Available at: <https://data.tuik.gov.tr/Bulten/Index?p=Agricultural-Holdings-Labour-Wage-Structure-2020-2021-45783>
22. La Banque mondiale, 2023. Données sur la Turquie [Online]. Available at: <https://data.banquemondiale.org/indicateur/AG.CON.FERT.ZS?end=2020&locations=TR&start=1961&view=chart>
23. Matthias Lehner, 2009. Obstacles auxquels sont confrontés les agriculteurs biologiques locaux dans le secteur agricole biologique turc: une tentative d'identifier les obstacles et de suggérer des moyens de les éliminer [Online]. Available at: [https://www.researchgate.net/publication/41793642\\_Hindrances\\_local\\_organic\\_far](https://www.researchgate.net/publication/41793642_Hindrances_local_organic_far)
24. Business Turkey Today, 2020. Un bref examen du secteur de la vente au détail alimentaire en Turquie et des plus grandes chaînes [Online]. Available at: <https://businessturkeytoday.com/a-brief-review-of-food-retail-sector-in-turkey-and-largest-chains.html>
25. Mustafa Aslan, 2019. Les ouvriers saisonniers kurdes [Online]. Available at: <https://journals.openedition.org/hommesmigrations/1972>
26. Trading Economics, 2023. Turquie - Emploi dans l'agriculture (% de l'emploi total) [Online]. Available at: <https://tradingeconomics.com/turkey/employment-in-agriculture-percent-of-total-employment-wb-data.html>
27. EBRD Green Cities, 2020. Plan d'action de la ville verte d'Izmir [Online]. Available at: [https://ebrdgreencities.com/assets/Uploads/PDF/020e83ee0c/GCAP-EN\\_Optimized.pdf](https://ebrdgreencities.com/assets/Uploads/PDF/020e83ee0c/GCAP-EN_Optimized.pdf)
28. La Banque mondiale, 2020. Consommation d'engrais (kilogramme par hectares de terres arables) en Turquie [Online]. Available at: <https://donnees.banquemondiale.org/indicateur/AG.CON.FERT.ZS?end=2020&locations=TR&start=1961&view=chart>
29. Municipalité métropolitaine d'Izmir et la Banque Européenne, 2020. Plan d'action de la ville verte d'Izmir [Online]. Available at: [https://ebrdgreencities.com/assets/Uploads/PDF/020e83ee0c/GCAP-EN\\_Optimized.pdf](https://ebrdgreencities.com/assets/Uploads/PDF/020e83ee0c/GCAP-EN_Optimized.pdf)
30. Union pour la Méditerranée . Projet de gestion intégrée des déchets urbains d'Izmir [Online]. Available at: <https://ufmsecretariat.org/fr/project/izmir-urban-integrated-waste-management-project/>
31. Mr. Selim Alpaslan, Agricultural Engineer at the Directorate of Agriculture of the Municipality of Izmir and Ms. Pinar Eldem Çulhaoğlu and Ms. Çimen Demirel, researchers and experts in agriculture and coordinators of the Metropolitan Municipality of Izmir - Interview conducted by Let's Food on January 26, 2023.
32. Le Point, 2021. Turquie: l'économie en berne, le spectre de la pauvreté plane [Online]. Available at: [https://www.lepoint.fr/monde/turquie-l-economie-en-berne-le-spectre-de-la-pauvrete-plane-12-03-2021-2417519\\_24.php#11](https://www.lepoint.fr/monde/turquie-l-economie-en-berne-le-spectre-de-la-pauvrete-plane-12-03-2021-2417519_24.php#11)

