



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION

# The UNIDO Approach to Cluster Development

KEY PRINCIPLES AND PROJECT EXPERIENCES



Technical Paper

DEPARTMENT OF DIGITALIZATION, TECHNOLOGY AND INNOVATION

INCLUSIVE AND SUSTAINABLE INDUSTRIAL DEVELOPMENT

# The UNIDO Approach to Cluster Development

Key Principles and Project Experiences

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## TECHNICAL PAPER

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Digitalization, Technology and Innovation

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INDUSTRIAL DEVELOPMENT ORGANIZATION



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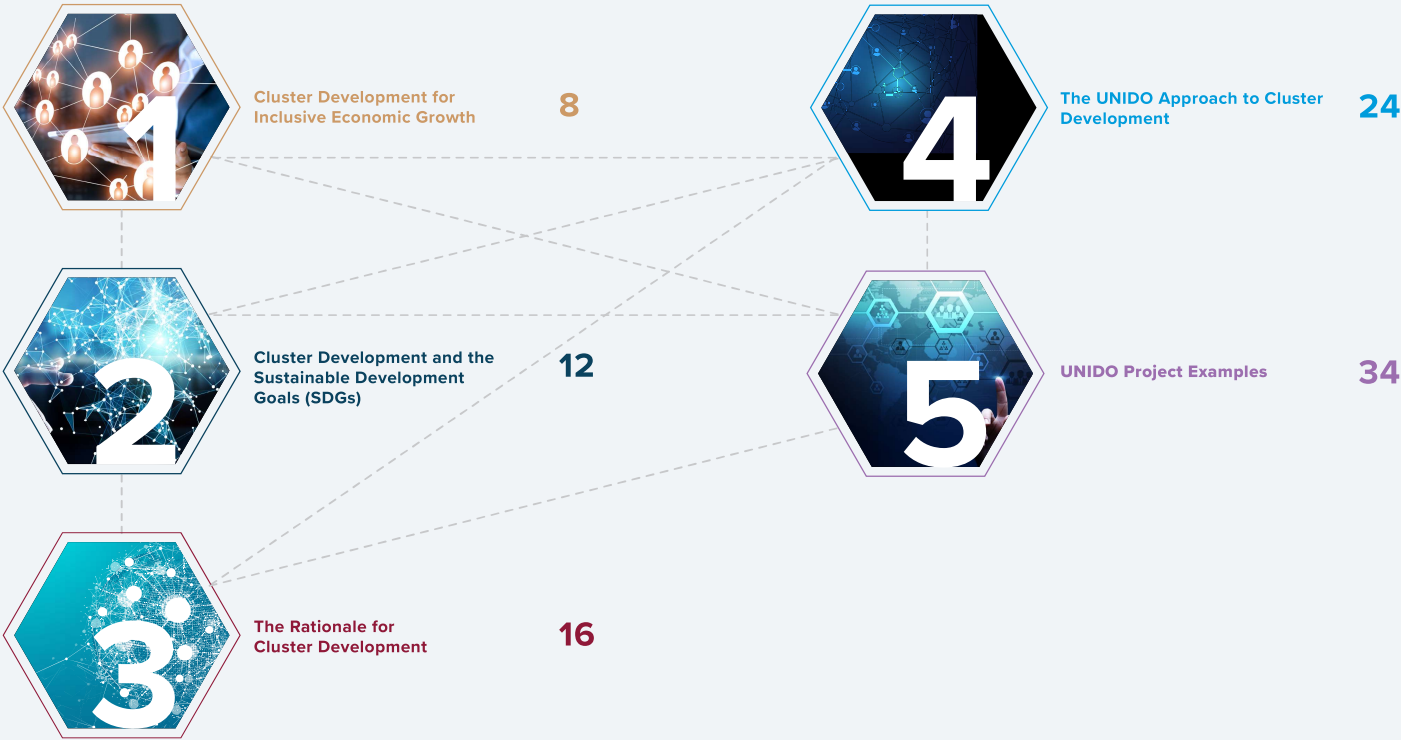
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Content



# 1

## Cluster Development for Inclusive Economic Growth



**The potential of cluster development resides not just in its capacity to stimulate high rates of growth, but also in the conducive environment it provides for the promotion of broad-based and inclusive forms of development.**

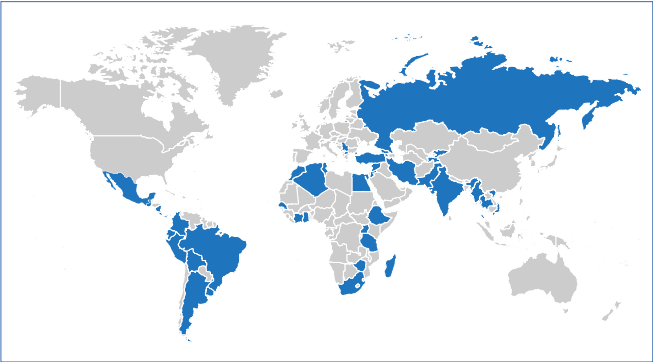
The underlying concern of UNIDO's cluster development approach is the promotion of private sector based inclusive growth, defined as a pattern of economic growth that creates equitable opportunities and benefits for every section of society.

The potential of cluster development resides not just in its capacity to stimulate high rates of growth, but also in the conducive environment it provides for the promotion of broad-based and inclusive forms of development. This is partly because clusters constitute socio-economic systems where the population of enterprises often overlaps

with the communities living and working within a specific area or territory.

Cluster-based entrepreneurs and workers often share a similar social, cultural and political background and practice reciprocity and self-help. This tends to lend itself to growth patterns that are likely to be more inclusive than in most other economic contexts.

Over the past 30 years, UNIDO has been involved in the implementation of cluster and network development projects in several countries around the globe.



Based on lessons learned from theory and practice, UNIDO cluster initiatives provide technical assistance designed to foster the undertaking of joint actions among firms and support institutions.

The rationale behind this approach rests in that joint actions allow cluster stakeholders to overcome limitations and reap opportunities that are beyond their individual reach.

Bottlenecks that constrain the growth of small-scale business are thereby removed, triggering performance improvements under economic, social and environmental aspects. A performing private sector will turn into an engine of growth in the local economy, thus generating benefits and opportunities for participation for a wide range of economic actors.

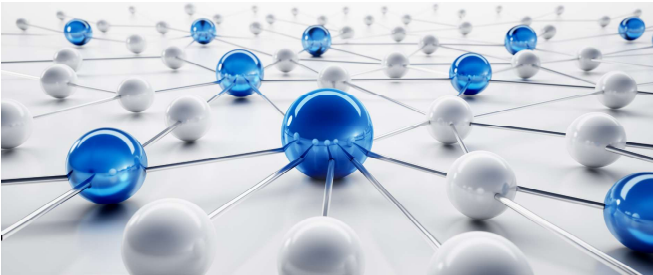
UNIDO follows an approach to cluster development aimed at addressing the root causes of cluster

stagnation and help unleash their growth potential. Support to formulate, implement, monitor and evaluate cluster development initiatives is provided to local institutions in countries and regions where clusters have been selected for support.

The focus lies on initiatives that encourage enterprises and institutions in these clusters to undertake joint actions that could ultimately yield benefits to the cluster as a whole and the communities in which they are embedded.

Getting there requires a strategic approach. UNIDO has developed a step by step methodology to assist cluster stakeholders throughout the complete cycle of cluster development initiatives which is presented in what follows.

For further information on the methodology, please refer to [www.clustersfordevelopment.org](http://www.clustersfordevelopment.org)





# 2

## Cluster Development and the Sustainable Development Goals (SDGs)



**UNIDO's approach to cluster development contributes to achieving the Sustainable Development Goals (SDGs) in various ways.**

UNIDO helps cluster entrepreneurs to overcome barriers to growth by increasing their collective efficiency and helping them to access new markets, thereby promoting inclusive and sustainable economic growth (SDG 8). Cluster Development encourages cluster firms to develop new products and improve production processes. It thus contributes to innovation and ensures inclusive and sustainable industrial development (SDG 9).

In many cluster projects, UNIDO works together with support institutions to develop educational programs that directly contribute to improving the quality and / or marketability of cluster products. Cluster initiatives can thus also have a positive

impact on improving education in project countries (SDG 4).

In cluster initiatives, UNIDO often works with micro enterprises in peripheral areas and marginalized populations, in particular young people and women. Supporting them will hence have a positive impact on reducing poverty (SDG 1) and enhancing gender equality (SDG 5). By promoting the development of agro-food, tourism and creative industries, which are often concentrated in peripheral regions, the Integrated Cluster Approach contributes to reducing regional inequalities within national borders (SDG 10). Better communication between stakeholders of the three sectors together with a collaborative

decision making and governance structure fosters regional development not at the expense of biodiversity sustainable utilization of resources for valorization of territorial assets (SDG 15), but by preserving natural and cultural heritage, through raising awareness about the importance



Introducing a gender perspective within cluster development programmes is a necessary element to enhance gender equality (SDG 5) and thus contribute to ensuring inclusive and sustainable industrial development.

# 3

## The Rationale for Cluster Development

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## WHY CLUSTERS



Clusters have gained increasing prominence in debates on economic development in recent years. Governments worldwide regard clusters as potential drivers of enterprise development and innovation. Cluster initiatives are also considered to be efficient policy instruments in that they allow for a concentration of resources and funding in targeted areas with a high growth and development potential that can spread beyond the target locations (spill-over and multiplier effects).

Examples of internationally renowned clusters, such as that of the Sassuolo ceramic cluster in Italy, the information technology cluster of Bangalore in India, the automotive cluster of Tangier in Morocco or the Australian and Chilean wine clusters demonstrate that clusters are environments where enterprises can develop a competitive and global edge, while at the same time generating wealth and local economic development in the process.

However, the mere fact of geographical agglomeration of enterprises is, in itself, no guarantee of strong economic performance; that is, the advantages associated with clustering do not always emerge automatically. Relatively few clusters in the developing world have been able to achieve high and sustained growth rates. In many cases, they are trapped in a cycle of cut-throat competition, stagnation and poverty and are unable to spontaneously achieve the transition to innovation and growth.

Consequently, appropriate policy support and assistance are often required. UNIDO has developed an approach to cluster development that tackles the underlying causes of cluster stagnation and helps seize growth opportunities and overcome obstacles to development.

## WHAT ARE CLUSTERS



**In the UNIDO context, clusters are defined as “geographical concentrations of inter-connected enterprises and associated institutions that face common challenges and opportunities”. This definition highlights two essential features of clusters:**

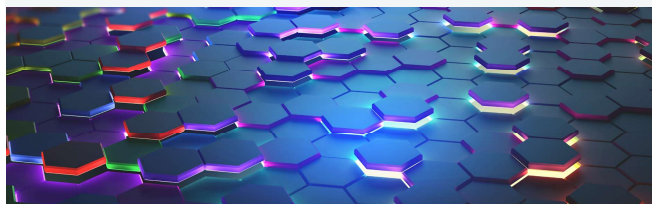
- 1 Clusters consist of a critical mass of enterprises located in geographical proximity to each other and enterprises within them share many common features:
  - Cluster as a critical mass of enterprises located in geographical proximity to each other. There is no universally accepted way of establishing the exact boundaries of a cluster. What is perceived as close in one location may represent an insurmountable distance in others; distance can be influenced by the availability of transport facilities, as well as by

cultural identity and social values. Moreover, the number of enterprises necessary to be considered as constituting a cluster can vary depending on the size of a country.

- As SMEs belonging to a cluster produce similar or related goods or services, they can benefit from economies of scale in their engagement in collective actions for the procurement of supplies and the marketing of their products. They can also benefit from information exchange, joint learning and the development and adaptation of innovations. The latter is particularly relevant because cluster-based entrepreneurs and workers often share similar socio-cultural backgrounds and practice reciprocity and self-help. Vibrant clusters are home to innovative firms that reap the benefits of an integrated support system and dynamic business networks. Cluster development often focuses on supporting SMEs who have weak relative power within the value chain to which they belong and are subject to buyer and supplier dominance. Supporting these entrepreneurs then comes with an angle of inclusiveness, supporting them for value chain inclusion.
- Finally, all enterprises share the same territory, its infrastructure, services and, in many cases, a common cultural identity. Enterprises within a cluster also often face common obstacles and challenges including, for example, a lack of infrastructure or limited access to capital.

2 Besides enterprises, clusters also include support institutions, such as:

- Business associations;
- Business Development Service (BDS) providers;
- Financial service providers, including banks;
- Public authorities such as local, regional and national governments and regulatory agencies;
- Training agencies such as vocational schools, universities, etc.





CLUSTERS AS PART OF LOCAL AND GLOBAL VALUE CHAINS

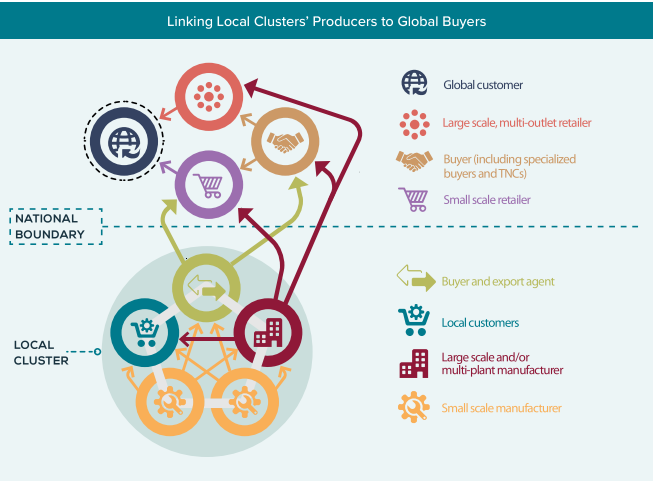


Cluster dynamics influence the performance of the value chains to which they belong, that can be only local (e.g. a handicraft cluster, or a cluster producing a typical food product also known as terroir product) or global (e.g. automotive or apparel). This does not, however, mean that they play an important role in all value chains; indeed, some value chains may not even consider any cluster-based organization of production. In any case, where clusters are important in value chains, there are cluster-based development interventions that contribute to value chain development. Many

clusters in developing economies show a sluggish performance and are resistant to improvement and growth. Firms within stagnating clusters face severe bottlenecks. They often operate outdated, often environmentally hazardous technologies. Shortages in infrastructure and basic services limit their ability to improve product quality and capture emerging market opportunities. These bottlenecks, in turn, are major obstacles for meeting international standards in terms of quality and efficiency necessary for successfully integrating into global value chains (GVCs).

Lead buyers on top of value chains impose quality criteria and standards that suppliers must comply with. Investments to achieve compliance are typically left to the suppliers which often times face resource constraints. UNIDO therefore also

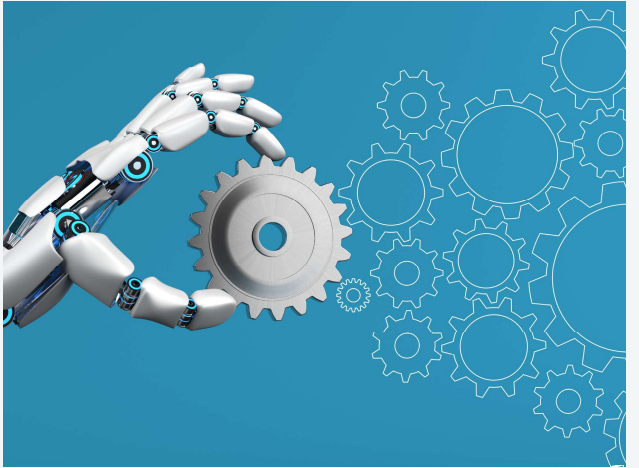
supports clusters in their endeavour to compete in a global trading system where increasingly stringent requirements apply with regard to product quality, safety, health and environmental impacts.

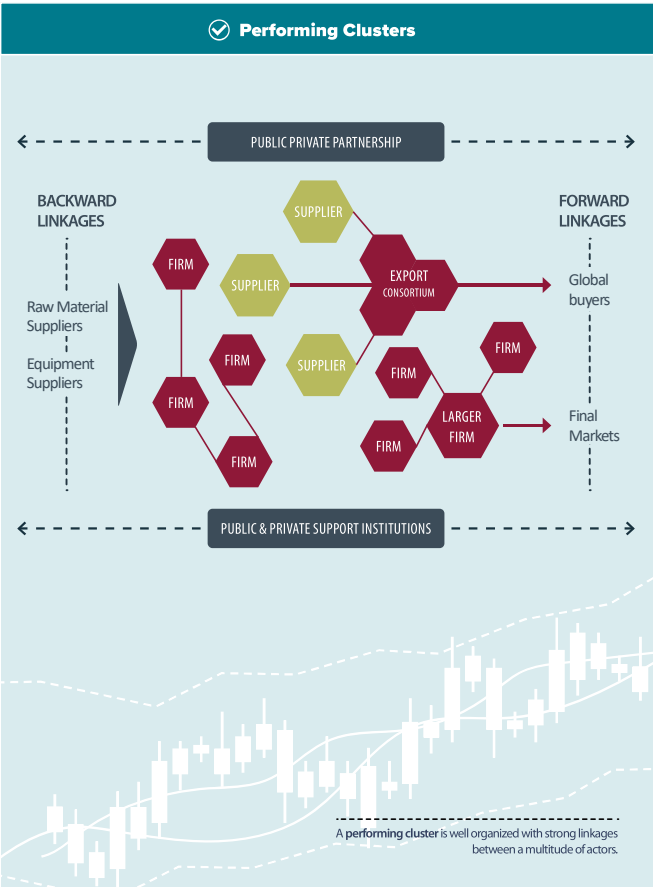


Source: Kaplinsky R. and J. Readman (2000)

INNOVATION CLUSTERS AND ECOSYSTEMS

Innovation clusters and strong innovation ecosystems are crucial to realize the potential of the Fourth Industrial Revolution. They are not only a source of quality employment and the backbone of any knowledge-based economy, but they also enable practice-oriented research, innovative solutions and deep technological modernization. It is also imperative to enhance the digital resilience and competitiveness of the business sector, particularly of SMEs. UNIDO promotes tailored programmes to assist MSMEs with digital transition; designs e-commerce strategies for digitalization; and strategizes to encourage innovation. Programmes focus inter alia on increasing the flexibility of production lines, aligning IT systems and support to evolving work requirements, increasing safety and cybersecurity.





# 4

## The UNIDO Approach to Cluster Development

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## THE INTERVENTION LOGIC OF UNIDO'S APPROACH



Clusters are particularly promising environments for SME development. Due to their small size, SMEs individually are often unable to realize economies of scale and thus find it difficult to take advantage of market opportunities that require the delivery of large stocks of standardized products or compliance with international standards.

They also tend to have limited bargaining power in inputs purchase, do not command the resources required to buy specialized support services, and have little influence in the definition of support policies and services.

The existence of a cluster per se does not automatically ensure that entrepreneurship will flourish or that enterprises will generate sustained returns. Even when located within a cluster, small and medium-sized enterprises (SMEs) face barriers to growth. Although these barriers are often considered to relate to the size of the enterprises, on closer examination they are frequently revealed as having more to do with isolation.

In non-performing clusters, these constraints often manifest in unhealthy competition based on lowering wages, disregarding the welfare of workers, minimizing investment in technology and depleting natural resources. This form of competition results in stagnant clusters, with local stakeholders reaping few benefits.

Evidence from strongly performing clusters, by contrast, demonstrates that it is possible for SMEs to achieve high levels of growth by achieving steady quality improvements and adding value,

while at the same time respecting environmental, social and labour standards.

Spatial proximity and shared strategic interests allow enterprises and their support institutions to realize shared gains through the organization of joint actions between cluster enterprises (e.g. joint bulk inputs purchase or joint advertising, collaborative R&D or innovation projects, or shared use of equipment), and between enterprises and their support institutions (e.g. provision of technical assistance by business associations or investments in infrastructure by the public sector). The advantage accruing to the cluster from such collective efforts is referred to as collective efficiency.

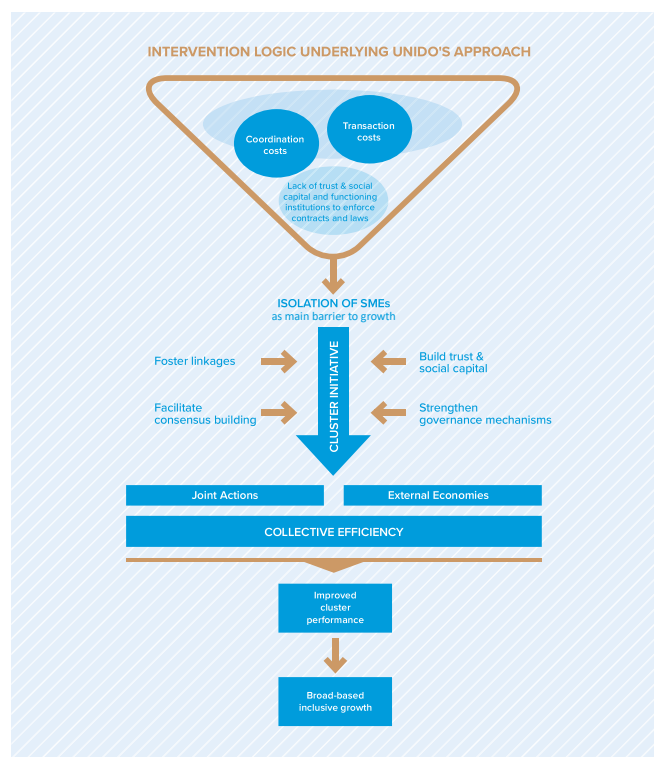
Evidence suggests that the willingness of entrepreneurs to engage in joint actions is a critical success factor to unleash their growth potential. However, despite the potential benefits deriving from joint actions, entrepreneurs often choose a go-it alone strategy. Several factors can hinder cooperation between enterprises including:

- transaction costs,
- coordination costs, and
- adverse business culture.

Obstacles to cooperation can also arise between enterprises and support institutions. While spatial proximity on its own can reduce some of the costs associated with cooperative activities between enterprises and institutions, other obstacles need to be consciously addressed for a cluster to become dynamic and growth-oriented. The

UNIDO approach to cluster development thus focuses on removing obstacles to joint actions with the objective of encouraging collective action.

The intervention logic underlying the approach is depicted to the below.



## KEY PRINCIPLES



To promote private sector based inclusive growth, UNIDO has developed an approach to cluster development based on the following principles:

## 1 Focus on existing clusters

An essential feature of the UNIDO approach is its focus on working with existing clusters, rather than creating new ones. While existing clusters often demonstrate significant unrealised potential, the creation of clusters from scratch is likely to lead to a top-down process, with private sector having limited incentives to assume a leading role.

## 2 Promote private sector based inclusive growth

The private sector plays a central role in promoting growth in general, as well as pro-poor growth in particular. Growth per se does not necessarily lead to a reduction in poverty. To be pro-poor, economic growth must be broad-based, inclusive of all categories of stakeholders, sustainable and gender balanced.

Cluster initiatives with a pro-poor focus need to focus not only at enhancing (labour force) productivity, innovation and participation in economic life, but also address non-economic issues such as limited human and social capital by empowering marginalized groups, promoting improved access to employment opportunities and improving the health and education of the labour force.

## 3 Encourage collective efficiency through joint actions

The UNIDO Approach to cluster development focuses on initiatives that encourage enterprises and institutions to undertake joint actions that could ultimately yield benefits to the cluster as a whole and the communities in which they are embedded.

Measures to help cluster stakeholders reduce barriers to cooperation and help them overcome their isolation include:

- Foster linkages between cluster stakeholders
- Facilitate consensus building
- Build relationships
- Encourage trust building
- Strengthen governance mechanism
- Support the cluster's institutional network

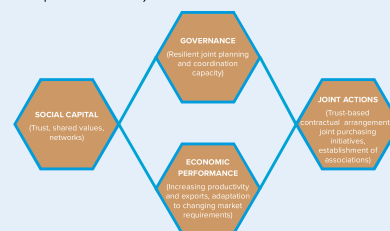
## 4

### Strengthen cluster governance mechanisms

As has been noted before, cooperation can be strengthened by investing in trust-building activities. In the context of cluster development, not only the propensity of individual cluster stakeholders to engage in joint actions is important, but also how these interactions are organized and embedded into the local economic system.

Any formal or informal organization or arrangement that plays a leadership role in initiating and managing joint actions for the improvement of cluster competitiveness can be identified a governance mechanism. UNIDO's approach to cluster development places great importance on strengthening the cluster's governance mechanisms by changing patterns of interactions among cluster stakeholders and establishing or reinforcing institutions that can lead and coordinate joint action.

Good governance in a cluster allows for coordinated and effective planning. Through coordinated joint actions the cluster can reach a higher level of performance. Good performance in turn increases the cluster's "social capital stock" (embodied e.g. in the trust, shared values). This raising "social capital stock" tends to reinforce the good governance in the cluster. UNIDO approach to cluster development attempts to set this virtuous cycle in motion.



## 5

### Provide targeted support to the cluster's institutional network

The UNIDO approach focuses on providing incentives for public and private sector bodies to more effectively promote cluster development and to build their capacity to do so.

Relevant local, regional and national institutions, including chambers of commerce, local governments, NGOs, producer associations, universities, training institutions and regional as well as local economic development agencies are assisted to gradually assume a strong supporting role in the development of the cluster.

Activities include establishing and/or providing support to business networks, building public-private partnerships and promoting dialogue among service providers and/or policy makers.

UNIDO also technically assists financial and non-financial service providers (e.g., business development service (BDS) providers, vocational schools etc.) to make their services more responsive to the demands from within the cluster.



PHASES OF CLUSTER DEVELOPMENT



**Phase I**  
**CLUSTER SELECTION**

A well-designed and participatory selection process based on clearly defined criteria is a precondition for a successful initiative as it allows the identification of those clusters, where the impact of planned interventions can be maximized given the available time and resources.

UNIDO's role in the selection process is to recommend criteria and variables most appropriate for the achievement of the development objective agreed upon.

Upon request, it may also provide technical inputs and can act as a facilitator to encourage the participation of national and regional actors. These are, together with the donors, the final decision makers in the cluster selection process.

**Phase II**  
**CLUSTER GOVERNANCE, TRUST AND THE ROLE OF THE CLUSTER DEVELOPMENT AGENT (CDA)**

Once a cluster has been selected for support, a Cluster Development Agent (CDA) or cluster broker, is appointed to facilitate the process of cluster development in the different target clusters.

After undertaking a cluster diagnostic study (see phase 3), the CDA will work with the cluster to enable the cluster stakeholders to work together to take the cluster from an underdeveloped one to a performing cluster, and to ultimately establish and operate a cluster governance structure.

**Phase III**  
**CLUSTER DIAGNOSTIC**

Once the cluster is selected, a diagnostic study is undertaken for each selected cluster. The diagnostic helps to

- develop an understanding of the socioeconomic and institutional environment of the cluster;
- detect potential leverage points for the intervention;
- provide a baseline for monitoring and evaluation; and
- build initial trust between the CDA and the cluster stakeholders.

The cluster diagnostic is a participatory exercise, carried out under the supervision and with the participation of the CDA, in which the cluster stakeholders are the principal informants. It frequently offers the first opportunity for the CDA to establish a relationship with the stakeholders and to introduce the concept of cluster development.

**Phase IV**  
**VISION BUILDING AND ACTION PLANNING**

Vision building and action planning are not one-off processes but develop in feedback loops through the life of a cluster initiative. Starting with a discussion on the results of the diagnostic study, cluster stakeholders formulate a shared vision for their future cluster performance or the overall cluster development path, which will be periodically reviewed and, if necessary, refined with time to take into account changes in the cluster or related framework conditions. Action planning then relates to the translation of the vision statement into a realistic and achievable development strategy over time and can be understood as a roadmap.

Action plans are also revised periodically and by all cluster stakeholders based on a sound monitoring and evaluation framework.

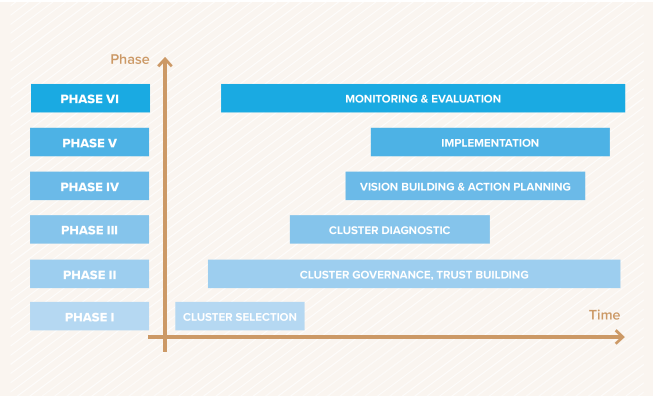
**Phase V**  
**IMPLEMENTATION**

Implementation refers to the execution of the activities described in the action plan and management thereof. The Cluster Development Agent facilitates this process, but does not engage in direct service provision or resource disbursement to cluster stakeholders. The CDA does not substitute for functions that can be performed by existing private or public sector organisations but rather builds their capacity for implementation and enhance their responsiveness to the needs of the cluster.

**Phase VI**  
**MONITORING AND EVALUATION (M&E)**

The Monitoring and Evaluation (M&E) of cluster initiatives is a continuous process, which starts with the drawing up of a clear result chain. A result chain outlines how specific inputs and project activities are linked to the expected outputs and outcomes and how they contribute to the impact or overall development objective of a cluster project or programme. In line with the information needs of various stakeholders, key performance indicators, data collection methods, and reporting responsibilities and frequencies are defined and integrated into an overall monitoring framework.

At the heart of the UNIDO's entire cluster development process are institutional capacity building and trust-building activities. These begin with the diagnostic study, continue during the design of the action plan and are reinforced during implementation and monitoring and evaluation.



## ACTORS IN UNIDO'S APPROACH TO CLUSTER DEVELOPMENT



Under the framework of a cluster development project, UNIDO identifies and trains institutional counterparts in the beneficiary country and project staff that will be engaged in project formulation and implementation.

At the outset, a project team is established including a Project Coordinator and one or a team of Cluster Development Agents (CDAs) and specialist consultants. These tend to be employed by UNIDO initially, but usually work within or side-by-side with local institutions to promote the dissemination of the approach and ensure its appropriateness to local conditions.

The wide participation of cluster stakeholders is encouraged by establishing a Cluster Commission and inviting representatives of the different interest groups in the cluster to participate in this Commission. Launching a cluster development initiative also requires wide political support and the building of institutional commitment to promote an environment conducive to its success. This role is performed by a Steering Committee in which UNIDO participates along with national and regional institutions.



### PROJECT COORDINATORS

Project coordinators have a deep understanding of the cluster development process and coordinate all cluster development activities in any given country. Among other tasks, their responsibilities normally include the overall management and monitoring of the initiative, the training, support and monitoring of the performance of the CDAs and building a network of contacts with strategic counterparts.



### CLUSTER DEVELOPMENT AGENTS

Most of the field activities are coordinated and overseen by Cluster Development Agents, the professionals who work on the ground in the cluster and accompany the process of cluster development from its initiation to phasing out. CDAs perform the role of impartial brokers or facilitators who provides guidance and support to the cluster in the organisation and coordination of joint activities.



### THE CLUSTER COMMISSION

The Cluster Commission is a network or forum of representatives of the key cluster stakeholders. Its role is to formulate the strategic objectives for the cluster and to launch and coordinate joint activities among cluster stakeholders. The Cluster Commission does not get involved with micro-management or administrative issues.



### THE STEERING COMMITTEE

The Steering Committee consists of major national stakeholders that have a direct interest in the cluster development initiatives being undertaken and can provide useful inputs to them. These normally include the Ministry of Industry and Trade, the Ministry of Education, sector-specific line ministries, industrial promotion organizations, export promotion agencies, research institutes and universities and development finance institutions and banks. The Steering Committee is normally responsible for promoting and launching the cluster development project, supporting the process of cluster selection and articulating development priorities. As in the case of the Cluster Commission, the Steering Committee usually does not get involved in micro-management and administrative issues.



## MAINSTREAMING GENDER IN CLUSTER DEVELOPMENT

Introducing a gender perspective within cluster development programmes is a necessary element for ensuring inclusive and sustainable industrial development, where no one is left behind, and interventions do not trigger the exclusion of women as a collateral effect of the development policy promoted. This implies moving away from the logic of adding a "gender component" to a project, and calls for gender analysis to be adopted as one of the main analytical tools.

When a gender perspective is adopted, the Cluster Development Agent would be able to anticipate potential gender concerns at all stages of project implementation, from the diagnostic study to the final evaluation. This process starts with the design of a diagnostic methodology that facilitates the assessment of the different positions of men and women in the cluster and how this impacts the accessibility of resources, skills and decision-making power.

Vision building and action planning benefit from the adoption of a gender focus. This can be done by explicitly stating gender-related objectives as well as implicitly incorporating them in the cluster activities.

A gender-inclusive action plan builds on the systematic integration of a gender perspective in the allocation of funds and definition of activities. Correspondingly, specific empowering practices offer important scope to foster women's participation in the cluster development initiative while establishing partnerships with complementary institutions in order to facilitate the implementation of the project and ensure the sustainability of outcomes.

All along the initiative, awareness-raising activities on gender disparities and their economic and social impacts are important tools that facilitate a progressive mind set change in the cluster stakeholders, men and women.

Overall, the commitment of the CDA and his/her team to promote gender equality at all stages of the initiative is crucial to the deployment of an effective gender inclusive cluster development programme. It has been observed that the corresponding skills and attributes of the project staff can be reinforced through the provision of appropriate training.

## IMPLEMENTATION MODALITIES



The UNIDO approach can be applied in any client country across the globe and with respect to any sector or location. For more information, please visit the UNIDO website featuring additional case studies and related UNIDO experiences and

consult the [www.clustersfordevelopment.org](http://www.clustersfordevelopment.org) website for more background information, details on our approach, as well as training and best practice materials.





# 5

## UNIDO Project Examples

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The following experiences based on UNIDO cluster and network development projects being implemented across the globe, illustrate how the methodology was adapted to the local context and/or integrated into a project with wider or more complex private sector development objectives.



### CLUSTER DEVELOPMENT PROGRAMME FOR PUNJAB (PAKISTAN): INTEGRATING CLUSTERS INTO GLOBAL VALUE CHAINS



Implementation period	2016 – 2021
Donors	Government of Punjab, World Bank

Within the context of this project, UNIDO was asked to provide technical assistance for the Cluster Development Initiative (CDI), a programme to support the development of several industrial clusters in the Punjab province of Pakistan and advance their further integration into global value chains. UNIDO's technical assistance was shaped based on three levels.

First, training and capacity building of the CDI Cluster Managers for active engagement with cluster members and facilitating cluster development process through:

- Sensitizing firms and institutions on key challenges and opportunities facing the cluster to build consensus and a common vision for the future of the cluster;
- Fostering dialogue among actors to formulate short to long-term strategies to achieve common goals of the cluster;
- Mobilizing technical and financial support for formulation and implementation of joint interventions aimed at addressing key bottlenecks in development of the cluster.

Second, formulation and implementation of Competitiveness Reinforcement Initiatives (CRI), covering strategic joint actions with involvement of industry and support institutions that aim at addressing key bottlenecks hampering development of clusters. Successfully implemented CRIs include:

- Establishment of a mould design and manufacturing center for the automotive component manufacturers' cluster to enhance the capacity of the industry to produce new components based on the requirements of OEMs. The center provides specialized engineering services that support component manufacturers by design and production of moulds as well as training of their workforce;
- Establishment of a Design and Market Intelligence Studio for the Footwear and Readymade Garment clusters to improve their position within global value chains, through enhanced design and market development capacity;

■ Export diversification and market development in the surgical equipment manufacturers cluster. Sialkot, although holding a significant share of global production of surgical equipment, its market share was limited, as most producers were unbranded and lacked direct access to export markets. This CRI, built capacity of enterprises to devise export marketing plans and supported development of markets in priority countries such as South Africa.

Third, improving cluster and sectoral policies through benchmarking of Punjab industrial clusters with comparable clusters around the world and drawing lessons for further improvement of their competitiveness by designing new strategic interventions (CRIs), as well as providing recommendations on sectoral policies. Moreover, the project provided a comparative assessment of Cluster Development Initiatives with different cluster support programmes around the world in order to provide actionable policy advice to enhance cluster policy tools and to establish a sustainability mechanism for the Cluster Development Initiative of the Government of Punjab, beyond project completion.



### CLUSTER INTERVENTION IN GHANA: IMPLEMENTING THE CONCEPT OF UNIDO'S "5 CS FOR COMPETITIVENESS"



Implementation period	2019 – 2023
Donor	European Union

The project, a component of the West African Competitiveness Programme, was launched in cooperation with the Ministry of Trade and Industry of Ghana with the objective to improve the competitiveness of Ghanaian exports with a focus on three main value chains encompassing various clusters: cassava, fruits (mango and pineapple), and cosmetics and personal care products. Access to regional and international markets is improved through enhanced quality and value-addition, compliance to international standards and low carbon sustainable production.

The project was launched based on the concept of UNIDO's "5 Cs for Competitiveness", an integrated approach that allows SMEs, structured in networks and clusters, to take full advantage of the technical support provided by the project.

During the first year of implementation, 20 experts from key support institutions have been trained on the UNIDO cluster methodology and enhanced their capacities in facilitating cluster support and their development. In a second step, 16 experts from 7 different institutions have been trained in their capacity to identify cluster needs and support producers, processors and support institutions to define collective activities. During the training, potential clusters were identified and selected for in-depth diagnostic studies.

The participatory diagnostic studies highlighted several areas of potential cooperation to enhance value chain competitiveness. In all clusters, members agreed to deepen their collaboration and integration to jointly

work towards improving the quality of their products and adopting good agricultural/manufacturing practices in order to meet customer demand and – where applicable – international standards.

In addition to these general objectives, the cosmetic clusters seek to improve and strengthen collaboration between the industry and academia; create synergies within the cosmetic value chain and the packaging industry and institutions; and support the Association of Ghana Industries (AGI) and the Ghana Cosmetic Manufacturing Association in developing an annual cosmetics market survey.

The cassava clusters seek to collaborate with equipment fabricators to develop and produce low cost, food grade equipment to meet standards and the mechanization needs of the clusters' actors, and to strengthen coordination with existing platforms and partnerships to organize collective action for joint purchasing, marketing, sales and lobbying at both local and national levels.

The fruits clusters envision to enhance farmers' access to certified planting materials, ensure respect of Good Agricultural Practices (GAPs) with emphasis on land preparation, harvesting techniques and certification schemes such as GLOBAL G.A.P., Fair Trade, Green Label. Furthermore, they seek to support processors in the implementation of basic HACCP, GMPs, FDA requirements and GSA standards, and organize training in marketing, assist producers and processors in market research, facilitate participation in trade fairs and exhibitions, and encourage collective branding.

COORDINATE	Promote dialogue and synergies within the VCs through Value Chain Strategic Committees
COMPETE	Develop competitive manufacturing capabilities by upgrading SMEs through clusters
CONFORM	Support Quality Infrastructure and SMEs to comply with market requirements
CONNECT	Promote efficient connectivity to markets by strengthening marketing capacities
CREDIT	Link SMEs to financial institutions to access appropriate and affordable credit schemes



CREATING EXPORT CONSORTIA IN COLOMBIA'S AGRI-BUSINESS AND COSMETICS CLUSTERS IN THE VALLE DEL CAUCA



Implementation period	2016 – 2019
Donor	Korea International Cooperation Agency (KOICA)

The project aimed at enhancing the competitiveness and market access of SMEs with an export potential in the agribusiness and cosmetics clusters in Valle del Cauca through the creation of export consortia.

An export consortium is a voluntary alliance of firms with the objective of promoting the export of goods and services of its members through joint actions. An export consortium is a formal organization to promote medium- to long-term strategic cooperation among firms, and it organizes joint activities to facilitate access to foreign markets.

The project was structured around the following components: (1) the formation of export consortia; (2) technical assistance to consortia member enterprises to comply with relevant quality standards and market requirements; and (3) institutional know-how transfer.

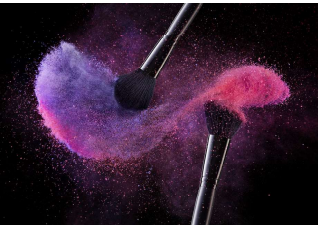
In the course of the initiative, eight export consortia were assisted directly, of which five became fully operational. Through the institutional know-how transfer, additional 9 consortia were supported indirectly. 33 firms (20 through direct technical assistance, and 13 through handholding of support institutions) were assisted. All together they comprised 1,857 fixed-term employees (774 women) and about 68 seasonal workers.

As a result of the UNIDO intervention, 21 companies managed to target new markets. Jointly as groups, the consortia realized exports of a total value of US\$ 871,941 to 10 markets including Spain, United States, France, Hong Kong, Italy, Portugal, Sweden, the Netherlands, Ecuador and the UK. Thanks to the experience gained as members of the consortia, individual companies managed to realize exports accounting for about US\$ 4,110,088.

Fixed-term employment in the directly assisted consortia has grown by 14% between 2016 and 2019 while in the three "indirectly assisted consortia", which were followed-up by support institutions under the methodology transfer process, a 28% increase in employment was recorded.

Thanks to a wide range of support activities including the assessments of companies' compliance capacity, actions plans to overcome quality gaps and training programs on technical matters, average compliance levels with relevant international standards increased considerably. Consequently, consumers (as an indirect beneficiary group) benefited from safer products available on the market.

To enhance the sustainability of the initiative, the project adopted a structured approach to transfer UNIDO's methodology to local actors and prepare them to manage future export consortia initiatives. Following the class room trainings, local support institutions were supported in developing their own consortia initiatives. For this purpose, UNIDO local experts followed up and mentored their staff in the actual implementation of the methodology.



PROMOTING CULTURAL AND CREATIVE INDUSTRIES CLUSTERS IN THE MEDITERRANEAN



Implementation period	2013 – 2017
Donors	European Union, Italian Cooperation

Recognizing the socio-economic contribution that the Cultural and Creative Industries (CCI) can make in various countries of the southern Mediterranean that enjoy rich historical heritage, UNIDO started a pilot initiative embedding the concept of clusters within CCI.

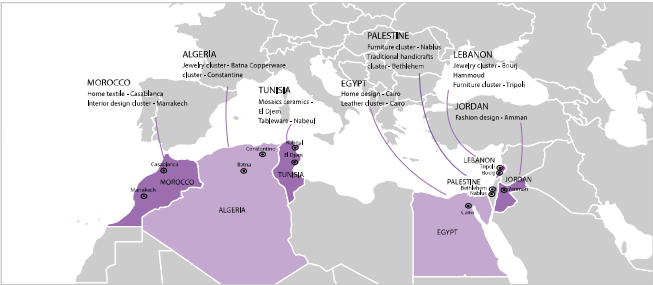
The project "Creative Mediterranean" covered 7 countries, namely Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine and Tunisia, where - in an inception phase - a mapping of clusters and value chains in cultural and creative industries was undertaken and over 140 clusters were identified. Subsequently, a call for proposals was launched to allow interested groups of companies to apply for UNIDO's assistance and submit their proposals. In each target country, a national steering committee comprising public and private actors shortlisted a selected number of clusters. During implementation, technical support was provided to a total of 14 clusters, including a wide range of industries such as jewellery, home textiles, furniture, pottery and copperware. To facilitate the artisans' access to international markets, "Creative Mediterranean" helped craftsmen modernize their workshops and processes, increase the quality of their products and improve their marketing and design skills. In total, the project assisted roughly 19,300 enterprises (64% of which were micro-

enterprises and workshops) with a total workforce of 280,000 persons.

In addition to the technical support in entrepreneurial cooperation and in product development, great emphasis was put on networking and international collaboration. Creative Hubs - platforms offering services and spaces to creative industry actors from designers to craftsmen and factories - were established to serve as knowledge repositories. These design centres increased national and regional expertise related to CCIs and cluster development, and thereby helped to diffuse design knowledge and culture and improved creativity.

Another focus of the initiative was on market access activities. In particular, marketing and branding strategies were developed for the new collections created by participating cluster artisans and participation in local and international trade-fairs was supported. Furthermore, cluster members were assisted in developing B2B linkages with local and international buyers.

As the initiative was intended as a pilot project that should encourage governments to replicate the approach at the national level, UNIDO helped to develop plans for national governments to replicate the project's activities.



BOOSTING CLUSTER DEVELOPMENT BY PROMOTING TYPICAL AGRI-FOOD AND TERROIR PRODUCTS (PROJECT PAMPAT)



Implementation period	2013 – 2019, covering Morocco and Tunisia; 2019 – 2024, Tunisia Phase II, including the organization of a National Contest for Local Food Products in Egypt
Donor	State Secretariat for Economic Affairs SECO

The “Programme for Market Access of Typical Agri-food and Terroir Products” (PAMPAT), aim at improving the performance, market access and the socio-economic conditions of SMEs in various agri-food clusters and value chains in Morocco and Tunisia. Project activities focus on strengthening the organization of the selected clusters and value chains, improving the productivity, quality/standard compliance and product development of SMEs, and enhancing their position in both domestic

and export markets. The programme also helps to ensure that products comply with the requirements of newly introduced geographical indications and quality brands, in order to position them in higher niche markets, and allow the producers to obtain a premium price and higher revenues.

In this programme UNIDO has been applying a holistic approach including the interrelated axes of intervention depicted below.



In Morocco, UNIDO implemented this approach to the prickly pears and the argan oil clusters/value chains, with a view to ensure the certification of producers and the market promotion of the Protected Geographical Indications (PGI). Within this project, the Value Chain Argan Federation (FIFARGANE - Fédération Interprofessionnelle de la Filière de l'Argane) was assisted to develop a traceability software to ensure that producers respect the code of practice for the production of the argan oil under the PGI. Producers, including cooperatives, groups of cooperatives and SMEs, were trained to comply with that same code of practice, as well as with the national law on food safety and hygiene. As a result, the number of producers certified based on the PGI increased by 150% between 2013 and 2019.

The programme also covered the promotion of collective branding centered on the argan oil PGI in order to

enhance market access for products produced by SME cooperatives and consortia within the argan oil value chain.

In Tunisia, the approach was applied to the Harissa and the prickly pears value chains and to the fig cluster of Djebba. This rural cluster is located in the North-West of the country and thanks to the unique quality attributes of the fig, it counts with the first Protected Geographical Indication granted to a fruit in Tunisia. The programme supported producers in the Djebba cluster to comply with the product specifications of the PGI and also worked with local authorities to set up a local association in charge by law of the self-control system. In 2019, already 25% of the local production was certified with the PGI. To convey the quality attributes of the labelled PGI figs to the consumers, a public-private promotion programme was set up, which consisted of tasting events in Tunisian

supermarket chains, cooking events and trade fair participation. As a result of the intervention, prices for the fig producers in Djebba have doubled and the PGI fruits were sold in different retail chains all over Tunisia, and were also exported to the Gulf countries and Canada.

In order to create additional revenues for the inhabitants of Djebba, the programme also supported local producer groups to start offering and marketing local products such as sun-dried figs, jams, traditional pastries and essential oils. A cooperative and two rural groupings were established and assisted to set-up new production facilities that comply with legal requirements.

Furthermore, they received trainings and technical assistance to standardize new processing techniques, to create innovative packaging and logistics solutions and to incorporate modern marketing and sales techniques. These new products from Djebba were experiencing a notable success on the local market. Within a couple of years, prices of dried figs had increased by 50%.

The PGI Djebba fig has also played a core role in making the mountain village increasingly well-known among Tunisians. Between 2015 and 2019 the number of visitors had more than doubled ([www.aoc-figuedjebba.com](http://www.aoc-figuedjebba.com)).

**The UNIDO Integrated Cluster Approach:**  
Linking Agro-food, Tourism and Creative Industries

In a globalizing world, even small differences are becoming increasingly significant in the development of local economies; therefore, a place-based territorial approach, which attempts to capitalize on distinct local characteristics, is an appropriate strategy to promote economic growth at the regional level. Linkages and synergies between food, tourism and the creative industries can provide a platform for local economic development and for turning comparative advantages into competitive advantages. These linkages offer considerable potential to grow demand and develop new products, experiences and markets.

To take into consideration the above, UNIDO has been implementing innovative activities and interventions that foster the development of 'integrated clusters' built through the combination (and the synergistic linkages) of the primary sector (agriculture) and tertiary service sector (tourism) activities with strong links to the cultural sector (creative industry). This implies the need of shifting from a sectorial orientation towards a territorial approach, in which the key pillar is in the ability of local actors to valorize the whole set of territorial goods and services in a complementary way. The 'integrated cluster' is not exclusively touristic or exclusively specialized in one production covered by the agro-food sector. On the contrary, these features, all present, are interdependent, together with the exploitation of cultural and creative resources.

The production system in an 'integrated cluster' is characterized by the presence of an agglomeration of enterprises developed around the distinctive resources or cultural and territorial capital. The process of valorization involves different complementary sectors, and new activities contribute to make the economic structure more complete and widen the opportunities for development.

For constructing an 'integrated cluster' a crucial role is played by public authorities, which should adopt a collaborative governance. This new way of understanding governance brings public and private stakeholders together in collective forums with public agencies to engage in consensus-oriented decision making. It also ensures that processes are broadly inclusive of all stakeholders, including both powerful and less powerful actors. In this respect there is a strong responsibility put on public agencies to set an appropriate institutional design so these processes are broadly inclusive of all stakeholders as well as ensure facilitative leadership for setting and maintaining clear ground rules, building trust, facilitating dialogue and exploring mutual gains.

### SUPPORTING WOMEN'S COOPERATIVES COMPLIANCE TO THE FOOD SAFETY STANDARDS IN THE ARGAN OIL CLUSTER OF MOROCCO (PROJECT PAMPAT)



The challenges faced by the Moroccan PAMPAT team, in their daily work with argan oil producers and women's cooperatives, with the implementation of the Food Safety Law (28/07) in 2016 were twofold:

- **TECHNICAL:** What should be done to improve cooperatives' premises and production processes in order to comply with the law without impacting on the traditional techniques included in the Protected Geographical Indication Code of Practices for the Argan Oil?
- **STRATEGIC:** How could women become active players in complying with the food safety standards? How to make sure that these women would not be excluded because of a lack of technical competencies and knowledge?

To tackle these issues, a female agronomist speaking the local language was hired by UNIDO. The technical aspect was handled by organizing working sessions with the national authority in charge of the law enforcement (ONSSA) in order to present the production methods and processes used by the argan oil women's cooperatives and to provide solutions, taking in to account the reality (isolation, lack of investment capacities, distance from water sources, low literacy level, etc.). These technical sessions and some field visits to the cooperatives have allowed the technical experts to come up with tailor-made solutions, taking into account their views and constraints.



On the strategic front, the in-depth understanding of the legal principles and requirements was indeed a challenge for the women's cooperatives, but it was also essential to maintain their role in the value chain.

The national expert in charge of the food safety training undertook participatory diagnostics with the cooperatives' members in order to familiarize them with the crucial aspects to be taken into consideration. She then worked with some of the cooperatives' leaders and familiarized them with the appropriate terms and tools for the training. Issues such as personal hygiene and changing clothes for work were considered as offensive by most of the women involved. However, because of the national expert's ability to translate the technical concepts into everyday local terms and to explain the rationale behind those actions, the women became more aware of the procedures to be followed and slowly started to involve their peers from other cooperatives to follow the necessary procedures.

As a result of such efforts, 66 diagnostics have been undertaken, 36 groups have been coached daily on their production methods, premises, equipment and personnel training, and 25 producers have already been declared compliant to the law by the national authority (ONSSA).

### CLUSTER-BASED POLICY ADVISORY FOR MONTENEGRO



Implementation period	2009 – 2016 (various phases)
Donors	European Union, Government of Montenegro, One UN Fund

In 2009, five United Nations agencies developed a joint project with a focus on the development of SME clusters. UNIDO's role was to support the Ministry of Economy in the development and implementation of a national cluster strategy, containing a concrete set of measures for systemically increasing the competitiveness and market access of SME clusters and networks in the country.

The process that led up to the development of this strategy focused on: (a) mapping of existing business clusters and networks in Montenegro; (b) undertaking diagnostic studies of 15 selected sample clusters to identify the key challenges and problems faced by the local businesses; (c) undertaking a demand assessment for key cluster products with a focus on potential buyers in the food and tourism industries; (d) undertaking a capacity-building and testing interventions in selected pilot clusters that have been diagnosed; (e) carrying out a capacity assessment of key support institutions and municipalities; and (f) drafting and implementing the "Strategy for Sustainable Economic Growth in Montenegro through the Introduction of Business

Clusters by the end of 2016" with a view to increasing the contribution of selected clusters and networks to employment retention, import substitution, export promotion or new business and job creation.

The adopted strategy envisaged contributing to a more balanced regional socio-economic development by enhancing the competitiveness and employment capacities of SMEs, and ensuring that the benefits deriving from the EU integration process and the further opening of markets are spread more equally across the different economic actors within the country.

Furthermore, recognizing that linkages between agriculture and the tourism industry can help producers access new markets and generate new income and employment opportunities, UNIDO assisted in developing the "Delicious Montenegro" brand. The idea was to unite different agri-food producers from various clusters under one umbrella brand and to foster linkages and local networks with gastronomy and the tourism sector ensuring social inclusion and reducing tourism leakage.

Within this project context, UNIDO adopted an integrated cluster approach encompassing the following activities:

- definition of brand elements and communication channels and promotional materials: brochure, roll-ups, posters, tags, flyers, website etc.;
- tourist trail development (olive oil trails to link to tourism in the regions of Bar and Ulcinj, and help the cluster tap into the significant competitive advantage of Montenegro's rich olive oil cultural heritage);
- national and international trade fair participation (the 'Delicious Montenegro' concept has been presented at the Slow Food Network's 'Terra Madre Salone Del Gusto' in Turin - one of the most important events dedicated to food and gastronomy);
- targeted technical and vocational trainings in business management and marketing;
- training on the UNIDO cluster development approach for local government staff and business support associations;
- adding value to quality products through certification;
- engaging producers to co-develop a new brand of Montenegrin ancient olive oil;
- creation of wine routes to promote Montenegro's autochthonous wine varieties;
- establishment of public-private partnership platforms.



DEVELOPING CLUSTERS OF AUTOMOTIVE COMPONENT SUPPLIERS IN THE SAMARA REGION OF RUSSIA



Implementation period	2009 – 2016 (two phases)
Donor	Government of Slovenia

This UNIDO project aimed at strengthening automotive component suppliers, optimizing the local supply chain, providing the region with an industry-specific and institutional development concept, and creating access to international markets, in particular the European Union.

Within the context of the project framework, the capacity of support institutions and local organizations were built and linkages to other automotive clusters were facilitated through cluster twinning.

In addition, a number of initiatives were implemented, such as the formation of the Association of Automotive Suppliers in the Samara Region (later referred to as "Automotive Cluster of Samara"), which was originally established with 17 members to:

- Support component manufactures to integrate into global supply chains;
- Enhance public-private dialogue through acting as the industry's communication centre;
- Promote the effective use of scientific, technological and innovative capacities of the Samara region through active collaboration.

Cluster twinning efforts with the Automotive Cluster of Slovenia resulted in a number of business partnerships and enhanced the communication between the two clusters through establishment of the Russian-Slovenian Business Club with 43 members that successfully explores business cooperation in automotive, energy efficiency and tourism sectors. Furthermore, 3 joint ventures (Russia-Slovenia) have been formed.



UNIDO's support to Automotive Industry Clusters

UNIDO offers a wide range of services targeted at the automotive supply chain. Due to its long-standing involvement in the automotive sector – through technical cooperation projects, research initiatives and global events in the fields of supplier upgrading/development, cleaner production, technology foresight, private standards, policy advisory matchmaking and investment promotion related to the automotive industry (and in particular to component manufacturers) – UNIDO has acquired an in-depth understanding of the sector and has established a relevant network of technical experts and collaborating institutions, which is essential for information and knowledge sharing as well as for the transfer of know-how and of technology. This has allowed the Organization to deliver tailor-made services, at the institutional and enterprise level, in support of car manufacturer suppliers that are facing increasing higher standards (in terms of cost, quality, delivery, and engineering know-how). Inter alia, UNIDO directly assists developing countries and economies in transition through policy advice to develop and implement support schemes for the automotive industry. UNIDO has impended related programs in Belarus, Colombia, India, Pakistan, Russia, Nigeria, Serbia and South Africa.





## Acronyms

BDS	Business Development Service
CCI	Cultural and Creative Industry
CDA	Cluster Development Agent
CDI	Cluster Development Initiative
CRI	Competitiveness Reinforcement Initiative
EU	European Union
GVC	Global Value Chain
M&E	Monitoring and Evaluation
PAMPAT	Programme for Market Access of Typical Agri-food and Terroir Products
R&D	Research and Development
RSS	Republic of South Sudan
SDG	Sustainable Development Goals
SME	Small and Medium Enterprise
UNIDO	United Nations Industrial Development Organization

### Further information

Further information on the UNIDO cluster programme is available at [www.unido.org](http://www.unido.org) and [www.clustersfordevelopment.org](http://www.clustersfordevelopment.org)

This publication may be downloaded free of charge from the website.

### UNIDO in brief

UNIDO is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability.

As of 1 April 2019, 170 States are Members of UNIDO. They regularly discuss and decide UNIDO's guiding principles and policies in the sessions of the Policymaking Organs.

The mission of the United Nations Industrial Development Organization (UNIDO), as described in the Lima Declaration adopted at the fifteenth session of the UNIDO General Conference in 2013, is to promote and accelerate inclusive and sustainable industrial development (ISID) in Member States.



[www.unido.org](http://www.unido.org)



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