K+S Group
## K+S at a Glance

### K+S Group financials 9M/2021 – continuing operations

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td>€2.144 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EBITDA</strong></td>
<td>€358 million</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EBITDA-Margin</strong></td>
<td>16.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Adjusted Free cash flow</strong></td>
<td>€-152 million</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Customer Segments

#### Agriculture

- **Revenues** €1.471 million
- 69%

- Potassium chloride (MOP)
- Fertilizer specialties

#### Industry+

- **Revenues** €672 million
- 31%

- Chemical
- Pharma
- Food
- Animal nutrition
- Oil and gas
- Water softening
- other industrial products

### Industy

#### Consumer

#### Communities
Global Presence – continuing operations¹

¹ Revenues by regions 2020

![World map showing global presence with percentages for different regions]

**Employees by region 2020: Total number: 11,135 FTE**

- Germany: 91%
- North America: 4%
- Rest of Europe: 4%
- Rest of the World: 1%
Adding value along our entire supply chain

<table>
<thead>
<tr>
<th>Exploration</th>
<th>Our potash and salt deposits came into being millions of years ago. They are either our property or we have corresponding rights or approvals that allow the extraction or solution mining of the raw material reserves.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>We extract raw materials in conventional mining below ground as well as through solution mining. We also use the power of the sun and extract salt by evaporating sea water or saline water.</td>
</tr>
<tr>
<td>Production</td>
<td>The refining of raw materials is one of our core competencies. Above ground, the crude salt is processed in complex, multi-phase, mechanical or physical processes, with the natural properties of the mineral remaining unchanged.</td>
</tr>
<tr>
<td>Logistics</td>
<td>The long-term securing of freight capacity is of strategic importance to us. A large part of our international transportation volume is forwarded by service providers with which we maintain long-standing partnerships.</td>
</tr>
<tr>
<td>Sales/Marketing</td>
<td>The K+S Group wants to be its customers’ preferred partner in the market. High product quality and reliability are decisive preconditions for this. K+S offers a comprehensive range of goods and services for agriculture, industry and private consumers.</td>
</tr>
<tr>
<td>Application</td>
<td>Our customers apply our products, use our raw materials in their processes or process them in their products. We make extensive product information available and advise our customers on the application of our products.</td>
</tr>
</tbody>
</table>
Board of Executive Directors

Dr. Burkhard Lohr
CEO

Thorsten Boeckers
CFO

Holger Riemensperger
COO
Active portfolio management


Salt Acquisition  Salt Acquisition  Salt Acquisition  Salt Acquisition  Salt Acquisition  Salt Acquisition  Salt Divestment

Fertilizer Acquisition  Fertilizer Acquisition  Fertilizer Acquisition  Fertilizer Divestment  Fertilizer Divestment  Fertilizer Acquisition  Fertilizer Acquisition
Signing achieved for complete OU Americas sale

Key data of the signed agreement:

- **Buyer:** Stone Canyon Industries Holdings LLC, Mark Demetree and affiliates
- **Gross proceeds:** USD 3.2 bn
- **EV/EBITDA:** 12.5x 2019 EBITDA of USD 257 million
- **Closing:** April 30, 2021
- **Preliminary net proceeds:** €2.6bn after tax
- **Preliminary gain on disposal:** €742 million
Important megatrends

8.5bn
Global population in 2030
Today: 7.3bn

0.2
Average global warming (°C)
Per decade

40%
of population suffer from water shortage by 2030

5.4bn
people belonging to the middle class by 2030

70% of water used for agriculture

2015: 3.0bn

- Arable land shrinking
- Yield needs to be improved
- Higher efficiency of fertilization and irrigation needed
- Plants have to be more stress resistant
- Infrastructure needs to be improved → focus on renewable energy
- Growing population, especially in Asia, needs more salt for various purposes
Growth areas

K+S Growth Landscape

Geo-expansion
- Africa
- Increase of fertilizer specialties
- Ramp of low-cost commodities

Fertilizer
- Africa
- Increase of fertilizer specialties

Industry
- Expand Pharma & Food portfolio
- Chemical applications

Growth areas and ideas cover core and adjacent businesses
<table>
<thead>
<tr>
<th>Goal (sponsor)</th>
<th>KPI</th>
<th>2019</th>
<th>2020</th>
<th>Target by 2030 at the latest</th>
<th>Achievements of targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment &amp; Resources</td>
<td>Resource efficiency (Holger Riemensperger, COO)</td>
<td>Deep-well injection of saline wastewater in Germany (m³ p.a.)</td>
<td>1.5</td>
<td>1.3</td>
<td>0 (starting January 2022)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Additional reduction of saline process water from potash production in Germany (m³ p.a.)*</td>
<td>+800,000</td>
<td>+200,000</td>
<td>-500,000 (excluding reduction by KCF facility and end of production SI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amount of residue used for purposes other than for tailings piles or avoided by increasing raw material yield (million tonnes p.a.)</td>
<td>1.5</td>
<td>1.2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Additional area of tailings piles covered (ha)</td>
<td>8.7</td>
<td>8.9</td>
<td>155</td>
</tr>
<tr>
<td>Energy &amp; Climate (Dr. Burkhard Lohr, CEO)</td>
<td>Carbon footprint for power consumed (kg CO₂/MWh)</td>
<td>-1.7%</td>
<td>-1.6%</td>
<td>-20%</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>Specific greenhouse gas emissions (CO₂) in logistics</td>
<td>-11.1%</td>
<td>-2.9%</td>
<td>-10%</td>
<td>29%</td>
</tr>
</tbody>
</table>

* Compensation-relevant (Executive Board and management)
## K+S sustainability KPIs and targets 2030

<table>
<thead>
<tr>
<th>Goal (sponsor)</th>
<th>KPI</th>
<th>2019</th>
<th>2020</th>
<th>Target by 2030 at the latest</th>
<th>Achievements of targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health &amp; Safety</strong></td>
<td>Lost time incident rate (LTIR)*</td>
<td>10.3</td>
<td>6.9</td>
<td>0 Vision 2030</td>
<td>20%</td>
</tr>
<tr>
<td>(Holger Riemensberger, COO)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Diversity &amp; Inclusion</strong></td>
<td>Employees’ favorable perception of inclusive work environment</td>
<td>54%</td>
<td>54%</td>
<td>&gt;90%</td>
<td>60%</td>
</tr>
<tr>
<td>(Dr. Burkhard Lohr, CEO)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sustainable Supply Chains</strong></td>
<td>Critical suppliers aligned with the K+S Group Supplier Code of Conduct (SCoC)*</td>
<td>23.3%</td>
<td>68%</td>
<td>100% by the end of 2025</td>
<td>68%</td>
</tr>
<tr>
<td>(Thorsten Boeckers, CFO)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spend coverage of the K+S Group (SCoC)*</td>
<td>44.9%</td>
<td>71.7%</td>
<td>&gt; 90% by end of 2025</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Compliance &amp; Anti-Corruption</strong></td>
<td>New since 2020: Coverage of K+S companies with a standardized compliance risk analysis (after achieving the old goal with 100% in 2019)</td>
<td>0%</td>
<td>100%</td>
<td></td>
<td>25%</td>
</tr>
<tr>
<td>(Thorsten Boeckers, CFO)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Compensation-relevant (Executive Board and management)
## K+S: Sustainability management

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Rating Scale</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dow Jones Sustainability Indexes</td>
<td>Rating scale 0 to 100 (the lower, the better)</td>
<td>34</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSCI</td>
<td>Rating scale from AAA to CCC (A: average)</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>ISS-oekom</td>
<td>Rating scale from A+ to D-</td>
<td>C-</td>
<td>C-</td>
<td>C-</td>
<td>C-</td>
</tr>
<tr>
<td>CDP</td>
<td>Climate Rating scale from A to D-</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water Rating scale from A to D-</td>
<td>C</td>
<td>B</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Sustainalytics</td>
<td>Rating scale from 0 to 40+ (the lower, the better)</td>
<td>37.9</td>
<td>38.5</td>
<td>39.1</td>
<td></td>
</tr>
<tr>
<td>V.E</td>
<td>Rating scale from 0 to 100 (the higher, the better)</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td></td>
</tr>
</tbody>
</table>

**Rating Scale**
- 0 to 100 (the lower, the better)
- A to D (A: average)
- A+ to D-
- 0 to 40+ (the lower, the better)
- 0 to 100 (the higher, the better)
The contribution of our products to the SDGs

- Direct effect
- Longer-term, overarching, indirect impact

SDGs: Sustainable Development Goals

Agriculture
Industry
Consumer
Communities
Customer Segments

- Agriculture
- Industry+
Long-term dynamics in demand for our customer segments

**Agriculture**

Demand driven by …

- Arable land shrinking
- Water shortage
- Increasing standard of living
- Population growth
- Economic growth and industrialization
- Urbanization
- Winter weather conditions
- Infrastructure development
- Global warming

**Industry**

**Consumer**

**Communities**
Customer Segment Agriculture at a glance

Agriculture customer segment

<table>
<thead>
<tr>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Close proximity to our main customers provides logistical advantages</td>
</tr>
<tr>
<td>▪ Shipments to overseas customers at competitive costs from Hamburg harbor</td>
</tr>
<tr>
<td>▪ Strong and long-standing customer relationships</td>
</tr>
<tr>
<td>▪ Broad specialty portfolio provides flexibility and stability, partly following different trends and seasons</td>
</tr>
</tbody>
</table>

Revenues split by region 2020 (%)

- Europe: 49 (Germany: 15)
- South America: 18
- Asia: 22
- North America: 5
- Others: 6

Revenues

- € million 9M/2020: 1,231,3
- € million 9M/2021: 1,471,7

Sales volume (mt)

- 9M/2020: 5.31
- 9M/2021: 5.67

Revenue Split by products 9M/2021 (%)

- Fertilizer specialties: 42
- Potassium chloride: 58
Plants need sunlight, water and minerals to thrive.

There are only few soils on earth which have a sufficient content and availability of plant nutrients to achieve high yields over a longer period without fertilization.

Potash is an indispensable supplement to the natural nutrient content of soils.

Compensation of the nutrient losses by harvest and other losses is necessary.

“The growth and yield of plants are limited by the nutrient which is in shortest supply”

Long-term key drivers for our fertilizer business

Agriculture customer segment

<table>
<thead>
<tr>
<th>Year</th>
<th>Global Population</th>
<th>Arable Land per Capita</th>
<th>Protein per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>3.0 billion</td>
<td>4.300 m²</td>
<td>60 g/ day</td>
</tr>
<tr>
<td>2010</td>
<td>6.9 billion</td>
<td>2.100 m²</td>
<td>80 g/ day</td>
</tr>
<tr>
<td>2050</td>
<td>9.7 billion</td>
<td>1.800 m²</td>
<td>130 g/ day¹</td>
</tr>
</tbody>
</table>

- Each year an additional 80 million people need to be fed – this equals to the population of Germany
- Available arable land per capita will decrease at the same time
- By 2050 an expanded world population will be consuming two thirds more animal protein than it does today

In 2050, only roughly a quarter of a soccer field will be available to feed one person year round - 80 percent of future growth in crop production will come from yield advancements driven by balanced use of fertilizers


¹ FAO 2014 - forecasts based on the expected increase in animal protein
What makes us different?

Agriculture customer segment

Fertilizer Specialties
- can be applied universally to all crops not sensitive to chloride and to all types of soil
- standard product used for commodity crops
- mainly used for special applications (e.g. chloride-sensitive crops)
- products containing a broad range of nutrients (e.g. potash, magnesium, sulphur)
- premium products used for high-value crops

Potassium Chloride (MOP)
- mainly used for special applications (e.g. chloride-sensitive crops)
- products containing a broad range of nutrients (e.g. potash, magnesium, sulphur)
- premium products used for high-value crops
- can be applied universally to all crops not sensitive to chloride and to all types of soil
- standard product used for commodity crops
Potash price development

Agriculture customer segment

Pricing (Source: FMB Argus Potash)
World potash production and sales by region

Agriculture customer segment

in million tonnes

<table>
<thead>
<tr>
<th>Region</th>
<th>2020</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>World potash production:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>75.5 million tonnes</td>
<td>71.0 million tonnes</td>
</tr>
<tr>
<td>World potash sales volume:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>76.2 million tonnes</td>
<td>68.5 million tonnes</td>
</tr>
</tbody>
</table>

Basis: year 2020
Incl. sulphate of potash and low-grade potash
Sources: IFA, K+S

2020: 75.5 million tonnes
2019: 71.0 million tonnes

2020: 76.2 million tonnes
2019: 68.5 million tonnes
Supplier structure on the global potash market

Agriculture customer segment

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canpotex</td>
<td>29%</td>
</tr>
<tr>
<td>BPC</td>
<td>16%</td>
</tr>
<tr>
<td>Uralkali</td>
<td>15%</td>
</tr>
<tr>
<td>K+S</td>
<td>9%</td>
</tr>
<tr>
<td>ICL</td>
<td>7%</td>
</tr>
<tr>
<td>APC</td>
<td>4%</td>
</tr>
<tr>
<td>EuroChem</td>
<td>3%</td>
</tr>
<tr>
<td>SQM</td>
<td>1%</td>
</tr>
<tr>
<td>China</td>
<td>15%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
</tbody>
</table>

Global Potash sales volumes:
2020: 76.2 million tonnes
2019: 68.5 million tonnes

Basis: 2020
Source: IFA, K+S

Incl. potassium sulphate and potash grades with lower K₂O content
Global potash supply and demand

Agriculture customer segment

Production is driven by demand despite continuous excess capacity

Source: IFA, K+S; incl. sulphate of potash and low grade potash of about 5 million tonnes eff. (product)
Agriculture customer segment

Between plan and reality: Potash projects announced since 2006 (Greenfield)

Announced projects or in early development phases

160

Projects with a high probability of implementation by 2025

6

Projects in ramp-up phase

2
Agriculture customer segment

What is behind the greatly feared oversupply?

- Only 5 years ago, the technically available capacity in 2025 was estimated to be 12 million tonnes higher than today
- Even now, greenfield projects by potash newcomers will still account for a significant share of the total until 2025
- Non-utilization of capacity by existing producers not taken into account
- Global capacity load should level off at the long-term average by 2025

Source: IFA, K+S; including potassium sulfate and potash varieties with a lower K2O content of about 5 million tonnes eff.
Potash use by crop in selected countries

Agriculture customer segment

<table>
<thead>
<tr>
<th>Country</th>
<th>Wheat</th>
<th>Corn</th>
<th>Rice</th>
<th>Oilseeds</th>
<th>Sugar crops</th>
<th>Fruits &amp; vegetables</th>
<th>Other crops</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-28</td>
<td>16%</td>
<td>13%</td>
<td>1%</td>
<td>11%</td>
<td>5%</td>
<td>12%</td>
<td>42%</td>
</tr>
<tr>
<td>Brazil</td>
<td>16%</td>
<td></td>
<td>2%</td>
<td></td>
<td>18%</td>
<td>7%</td>
<td>15%</td>
</tr>
<tr>
<td>Indonesia</td>
<td></td>
<td>8%</td>
<td></td>
<td></td>
<td>2%</td>
<td>7%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: IFA, Estimates of Fertilizer Use by Crop in Selected Countries in 2010-2010/11, published 2013
Farmer profitability of US corn

Agriculture customer segment

- Expenditure on potash products only amounting to approx. 4% of the total costs
- Earnings prospects should give the agricultural industry sufficient incentive to increase yield per hectare by using plant nutrients
### Global potash sales volume by region

#### Agriculture customer segment

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Europe</td>
<td>5.9</td>
<td>5.6</td>
<td>5.8</td>
<td>6.2</td>
<td>6.0</td>
<td>5.9</td>
<td>6.2</td>
<td>6.2</td>
<td>6.0</td>
<td>6.2</td>
</tr>
<tr>
<td>Central Europe / FSU</td>
<td>4.4</td>
<td>5.1</td>
<td>4.7</td>
<td>4.4</td>
<td>4.8</td>
<td>4.8</td>
<td>5.2</td>
<td>5.4</td>
<td>5.5</td>
<td>5.4</td>
</tr>
<tr>
<td>Africa</td>
<td>0.7</td>
<td>0.7</td>
<td>0.8</td>
<td>1.0</td>
<td>1.0</td>
<td>1.1</td>
<td>1.4</td>
<td>1.6</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>North America</td>
<td>10.2</td>
<td>9.1</td>
<td>9.7</td>
<td>11.8</td>
<td>9.5</td>
<td>10.9</td>
<td>11.2</td>
<td>11.5</td>
<td>9.8</td>
<td>11.3</td>
</tr>
<tr>
<td>Latin America</td>
<td>10.5</td>
<td>10.5</td>
<td>11.0</td>
<td>11.9</td>
<td>11.5</td>
<td>12.2</td>
<td>12.7</td>
<td>13.7</td>
<td>13.5</td>
<td>16.6</td>
</tr>
<tr>
<td>Asia</td>
<td>28.0</td>
<td>23.4</td>
<td>26.2</td>
<td>32.4</td>
<td>32.3</td>
<td>30.1</td>
<td>32.5</td>
<td>32.6</td>
<td>31.6</td>
<td>34.6</td>
</tr>
<tr>
<td>- thereof China</td>
<td>12.7</td>
<td>12.0</td>
<td>13.8</td>
<td>16.7</td>
<td>18.5</td>
<td>16.2</td>
<td>16.2</td>
<td>16.3</td>
<td>17.8</td>
<td>18.7</td>
</tr>
<tr>
<td>- thereof India</td>
<td>5.0</td>
<td>2.8</td>
<td>3.5</td>
<td>4.5</td>
<td>4.1</td>
<td>4.0</td>
<td>5.0</td>
<td>4.5</td>
<td>4.5</td>
<td>5.2</td>
</tr>
<tr>
<td>Oceania</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.7</td>
<td>0.6</td>
<td>0.6</td>
<td>0.7</td>
<td>0.8</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>World total</strong></td>
<td>60.2</td>
<td>54.8</td>
<td>58.7</td>
<td>68.4</td>
<td>65.7</td>
<td>65.6</td>
<td>69.9</td>
<td>71.8</td>
<td>68.5</td>
<td>76.2</td>
</tr>
</tbody>
</table>

*Incl. potassium sulphate and potash grades with lower K₂O content of around 5 million tonnes eff.*

Sources: IFA, K+S
Industry+ customer segment at a glance

Industry+ customer segment: continuing operations

<table>
<thead>
<tr>
<th>€ million</th>
<th>9M/2020</th>
<th>9M/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>572.1</td>
<td>672.0</td>
</tr>
<tr>
<td>Sales volume (mt)</td>
<td>3.89</td>
<td>5.69</td>
</tr>
<tr>
<td>-thereof: de-icing</td>
<td>0.67</td>
<td>2.29</td>
</tr>
</tbody>
</table>

Characteristics

- Emerging markets: Footprint in rising markets such as Asia as industrialization drives demand for electrolysis
- Electrolysis and specialties: High product quality, service and customer proximity
- Pharma: High quality standards, certificates, innovation and superior customer services as well as reliability
- Consumers: strong brands for table salt, water softening, pool salts and de-icing salt
- Communities: public road construction authorities, winter road clearance service providers and large commercial users procure de-icing salt from K+S through public tenders

Revenue Split by products 9M/2021 (in million €)

- Industry 490.0
- Chemical 112.5
- Food 70.0
- Pharma 18.6
- Animal nutrition 45.8
- Complementary activities 120.0
- Other 18.8
- Industrial applications 65.7
- Water softening 38.6
- Communities 138.0
- Consumers 44.0
Broad variety of industry application areas (1)

Industry+ customer segment

化学

- 主要应用:
  - 化工行业
  - 氯-碱过程（→ PVC）
  - 聚碳酸酯，MDI（异氰酸酯）（→ 塑料，合成树脂）
  - 合成苏打灰（→ 玻璃）

食品加工

- 主要应用:
  - 食品加工行业
  - 烘焙行业
  - 调味和防腐剂
  - 鱼类保鲜

医药

- 主要应用:
  - 注射，透析溶液
  - 药物

石油和天然气

- 主要应用:
  - 钻井液
Broad variety of industry application areas (2)

Industry+ customer segment

**Animal nutrition**
- Main applications:
  - Animal feed
  - Lickstones

**Water softening**
- Main applications:
  - Water softening
  - Water treatment

**Complementary**
- Main services:
  - Waste management and recycling
  - Granulation of Catsan® for Mars GmbH
  - CFK (Trading)

**Other**
- Main services:
  - Dyeing works
  - Leather treatment
Main salt suppliers in Europe

Industry+ customer segment

Capacity in million tonnes (crystallized salt and salt in brine; excl. captive use)

Source: Roskill, K+S
Development of salt consumption and production\(^1\)

Industry+ customer segment

in million tonnes

**Consumption**
- North-America
- Europe
- Asia
- Other

2000: 220
2009: 268
2015: 295

CAGR: 2.0%

**Production**
- North-America
- Europe
- Asia
- Other

2000: 217
2009: 264
2015: 295

CAGR: 2.1%

\(^1\) excl. captive use; Source: K+S, Roskill 2011, 2014, 2016
Potash sites in Germany

Potash production

Potash mining in the Werra-Fulda region

Share of annual production capacity (in %)

1. Wintershall
2. Unterbreizbach  Integrated Werra plant  ~ 50
3. Hattorf
4. Zielitz  ~ 25
5. Neuhof-Ellers  ~ 20
6. Bergmannssegen-Hugo  ~ 5

(production site only, no mining)
Underground mining production cycle

Potash production

1. Blasting after shift end
2. Muck pile load and dump
3. Roof scaling
4. Cleaning
5. Roof bolting
6. Auger drilling
7. Face cleaning
8. Drilling
9. Charging with explosives
Potash processing above ground

Potash production

**Thermal dissolution**
- Heating: 25°C → 110°C
- Cooling: 95°C
- Mother brine + finely ground crude salt
- Undissolved residue + dissolved KCl
- Filtering
- Potassium chloride (KCl)
- Residue (NaCl) and Kieserite

**Flotation**
- Flotation agent
- Air bubbles
- Filtering and drying
- Residue (NaCl)
- Potassium chloride (KCl) or Kieserite

**Electrostatic separation (ESTA®)**
- Conditioning
- Truboelectric charging
- Separation in a free-fall separator
- Residue (NaCl)
- Potassium chloride (KCl) and Kieserite
Management of residues

Potash production

- The mined rock salt only contains a limited share of usable material (max. 30%), therefore a residue accumulation is unavoidable.
- This challenge is shared among all potash producing companies in the world!
- The recovery of residues is performed as effective as possible.
- The methods, processes and equipment for the construction of tailings piles from solid residues are scientifically justified, tried and tested in practice.
- Solid or liquid residues are disposed of worldwide in the following ways:

  ![Tailings piles](image1)
  ![Underground disposal](image2)
  ![River injection*](image3)
  ![Deep well injection](image4)

Ø Share of residue disposed by this method in the Hessian-Thuringian potash district:

- Tailings piles: ~80%
- Underground disposal: ~9%
- River injection*: ~8%
- Deep well injection (for K+S in the Hessian-Thuringian potash district until the year 2021): ~3%

- These ways of disposal – depending on the corresponding site – are used also in combination. They currently represent the best available technique.

* With low river water levels in the Werra, there are possibilities for K+S in the Hessian-Thuringian potash district to temporarily store liquid residues in water basins or suitable mine spaces on site or temporary ways of disposal by flooding decommissioned mines or gas caverns in Lower Saxony or Saxony-Anhalt.
Current environmental investments create long-term planning security

- Tailings pile extensions
  - Hattorf
  - Wintershall
  - Zielitz

  - Completed by end of 2022 / beginning of 2023
  - Next permit and significant investments in tailings pile extensions will not be necessary again until the end of the 2020s

- Liquid residues
  - Werra

  - Deep-well injection ends 2021
  - As of 2022: permanent storage underground (subject to approval)
  - From 2028: Higher utilization of underground storage through further treatment of saline water
  - Injection from 2028: only less concentrated tailings pile waters and no process waters
Development of saline wastewater Werra river

Potash production

20 million cbm

Utilization/Avoidance
(CapEx: almost € 500 million)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>20 million cbm</td>
<td></td>
<td></td>
<td>6.0</td>
<td>4.0</td>
<td>3.0</td>
<td>1.5</td>
<td>5.5 million cbm</td>
</tr>
</tbody>
</table>

Tailings pile waters

Process waters

2 At low water levels of the Werra river:

On-site:
- Temporary storage possibility of up to 1.0 million cbm (basins and temporary storage underground)

Off-site:
- Flooding of decommissioned mines or gas caverns for their restoration

1 Electrostatic separation method; 2 Further reduction and avoidance of tailings pile waters targeted by building polders and covering tailings piles; continuing R&D developments, amongst others together with the company K-UTEC to be able to produce additional products from process and tailings pile waters. 4 River Basin Community Weser

Deep-well Injection until 2021, as of 2022: permanent storage underground (subject to approval); as of 2028: higher utilization of storage underground with additional processing

Discharge Werra2: as of 2028: only tailings pile waters with lower concentration3: (in accordance with targets of FGG Weser4)
Bethune – solution mining (example: primary mining)

Potash production

- In solution mining, freshwater is brought into solvent (salt) rock through a drill hole, therefore creating chambers, or caverns, filled with a water-salt solution. In a subsequent step, the saturated brine is brought to the surface through an additional pipeline.

- During the primary mining process, the cavern expands to create an ideal form for commencing secondary mining (see next page).
Bethune – primary versus secondary Mining

Potash production

Secondary mining [NaCl brine mining / crystallisation pond]

- Secondary mining uses exclusively saturated NaCl solution to selectively dissolve residual KCl from existing caverns

- Advantages (in comparison to primary mining):
  - lower energy intensity (e.g. injection brine is heated via waste heat from evaporators and KCl is crystalized in the cooling pond via natural cooling)
  - substantially more efficient with the use of water
  - reduces salt to tailings up to 30%

Operates at 50% lower production costs than primary mining
Bethune – strengthening our global presence

Potash production

- Expanding our current production portfolio in Germany with a North American production site → Second-source supplier
- Securing a good asset base with competitive production costs
- Sales and distribution through existing distribution structures of the K+S Group
- Regional growth projects in China and Southeast Asia
- Flexible multi-product strategy
Main production methods

- Around 70% of worldwide salt production (more than 290 million tonnes including brine) is obtained from rock salt mining and solution mining.
- Approximately 30% of production is obtained from seawater and salt lakes.
- Salt is produced in almost every country in the world. Due to the high share of transportation costs in production costs, markets are generally regionally limited to the area around the production locations.
Key financials

**Revenues (€ billion)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>3.5</td>
<td>3.6</td>
<td>4.0</td>
<td>4.1</td>
<td>3.7</td>
</tr>
</tbody>
</table>

**EBITDA (€ million)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>519</td>
<td>577</td>
<td>606</td>
<td>640</td>
<td>445</td>
</tr>
</tbody>
</table>

**EBITDA margin (%)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>15</td>
<td>16</td>
<td>15</td>
<td>16</td>
<td>12</td>
</tr>
</tbody>
</table>

**FCF vs Net Financial Debt/EBITDA**

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>-777</td>
<td>-390</td>
<td>-206</td>
<td>+140</td>
<td>7.2</td>
</tr>
</tbody>
</table>
Operating and free cash flow (adjusted) continuing and discontinued operations

(€ million)

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating Cash Flow</th>
<th>Free Cash Flow (adjusted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>756 (-306)</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>719 (-306)</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>669 (-636)</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>445 (-777)</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>307 (-390)</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>309 (-206)</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>640 140 (-206)</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>429 (-42)</td>
<td></td>
</tr>
</tbody>
</table>
# Debt profile (promissory notes and bonds)

## Financing instruments

<table>
<thead>
<tr>
<th>€m</th>
<th>Amount outstanding</th>
<th>Coupon</th>
<th>Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promissory note and loans</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior unsecured notes due 2021</td>
<td>441</td>
<td>4.125%</td>
<td>Dec-21</td>
</tr>
<tr>
<td>Senior unsecured notes due 2022</td>
<td>207</td>
<td>3.000%</td>
<td>Jun-22</td>
</tr>
<tr>
<td>Senior unsecured notes due 2023</td>
<td>443</td>
<td>2.625%</td>
<td>Apr-23</td>
</tr>
<tr>
<td>Senior unsecured notes due 2024</td>
<td>485</td>
<td>3.250%</td>
<td>Jul-24</td>
</tr>
</tbody>
</table>

## Debt maturity profile

- **2021**: €441
- **2022**: €207
- **2023**: €456
- **2024**: €485

+ Syndicated credit facility of up to €600 million (available until 2024)
+ Commercial paper program as an additional source of liquidity
# Cash flow and balance sheet continuing and discontinued operations

<table>
<thead>
<tr>
<th></th>
<th>In € million</th>
<th>FY/19</th>
<th>3M/20</th>
<th>H1/20</th>
<th>9M/20</th>
<th>FY/20</th>
<th>3M/21</th>
<th>H1/21</th>
<th>9M/21</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating cash flow</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- thereof continuing operations</td>
<td></td>
<td>640</td>
<td>328</td>
<td>322</td>
<td>328</td>
<td>147</td>
<td>69</td>
<td>83</td>
<td>95</td>
</tr>
<tr>
<td>- thereof discontinuing operations</td>
<td></td>
<td>124</td>
<td>169</td>
<td>227</td>
<td>169</td>
<td>82</td>
<td>81</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td><strong>Investing cash flow</strong></td>
<td></td>
<td>-500</td>
<td>-283</td>
<td>-44</td>
<td>-157</td>
<td>-51</td>
<td>-44</td>
<td>2.480</td>
<td>2.063</td>
</tr>
<tr>
<td>(pre-sale/ purchase of securities)</td>
<td></td>
<td>-51</td>
<td>-44</td>
<td>-138</td>
<td>-237</td>
<td>-381</td>
<td>-97</td>
<td>-164</td>
<td>-247</td>
</tr>
<tr>
<td><strong>Adjusted free cash flow</strong></td>
<td></td>
<td>140</td>
<td>204</td>
<td>161</td>
<td>45</td>
<td>-42</td>
<td>37</td>
<td>2,549</td>
<td>2,480</td>
</tr>
<tr>
<td>- thereof continuing operations</td>
<td></td>
<td>204</td>
<td>161</td>
<td>45</td>
<td>-42</td>
<td>37</td>
<td>2,549</td>
<td>2,480</td>
<td></td>
</tr>
<tr>
<td>- thereof discontinuing operations</td>
<td></td>
<td>140</td>
<td>204</td>
<td>161</td>
<td>45</td>
<td>-42</td>
<td>37</td>
<td>2,549</td>
<td>2,480</td>
</tr>
<tr>
<td><strong>Capex</strong></td>
<td></td>
<td>493</td>
<td>343</td>
<td>288</td>
<td>526</td>
<td>48</td>
<td>135</td>
<td>223</td>
<td></td>
</tr>
<tr>
<td>- thereof continuing operations</td>
<td></td>
<td>72</td>
<td>174</td>
<td>223</td>
<td>-42</td>
<td>-110</td>
<td>-15</td>
<td>-83</td>
<td>-152</td>
</tr>
</tbody>
</table>

**Net financial debt**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>FY/19</th>
<th>3M/20</th>
<th>H1/20</th>
<th>9M/20</th>
<th>FY/20</th>
<th>3M/21</th>
<th>H1/21</th>
<th>9M/21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3,117</td>
<td>2,917</td>
<td>2,979</td>
<td>3,109</td>
<td>3,217</td>
<td>3,185</td>
<td>695</td>
<td>-784</td>
</tr>
</tbody>
</table>

**Net financial debt/ EBITDA (LTM)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>FY/19</th>
<th>3M/20</th>
<th>H1/20</th>
<th>9M/20</th>
<th>FY/20</th>
<th>3M/21</th>
<th>H1/21</th>
<th>9M/21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4.9</td>
<td>5.1</td>
<td>5.6</td>
<td>5.7</td>
<td>7.2</td>
<td>7.2</td>
<td>2.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Equity ratio**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>FY/19</th>
<th>3M/20</th>
<th>H1/20</th>
<th>9M/20</th>
<th>FY/20</th>
<th>3M/21</th>
<th>H1/21</th>
<th>9M/21</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>42%</td>
<td>42%</td>
<td>43%</td>
<td>43%</td>
<td>28%</td>
<td>27%</td>
<td>30%</td>
<td>48%</td>
</tr>
</tbody>
</table>
Investor Relations
Investor Relations Contact

Julia Bock, CFA
Head of Investor Relations
Phone: + 49 561 / 9301-1009
Fax: + 49 561 / 9301-2425
julia.bock@k-plus-s.com

Janina Rochell
Senior Investor Relations Manager & Sustainability Expert
Phone: + 49 561 / 9301-1403
Fax: + 49 561 / 9301-2425
janina.rochell@k-plus-s.com

Nathalie Frost
Investor Relations Manager
Phone: + 49 561 / 9301-1403
Fax: + 49 561 / 9301-2425
nathalie.frost@k-plus-s.com

K+S Aktiengesellschaft
Bertha-von-Suttner-Str. 7
34131 Kassel (Germany)

E-Mail: investor-relations@k-plus-s.com
Website: www.kpluss.com
IR-Website: www.kpluss.com/ir
Newsletter: www.kpluss.com/newsletter
K+S Share

Key Data

- **WKN:** KSAG88
- **ISIN:** DE000KSAG888
- **Type of shares:** Registered shares of no-par value
- **Total number of shares:** 191,400,000
- **Trading segment:** Prime Standard
- **Ticker symbols:** Bloomberg SDF / Reuters SDFG

Shareholder Structure as of 31.12.2020

- **Freefloat 100%**
- **Private Investors 55%**
- **Institutional Investors 45%**

Covered by

- AlphaValue
- Baader Helvea Equity Research
- Bank of America Merrill Lynch
- BMO Capital Markets
- Citi Research
- Commerzbank
- Credit Suisse
- Deutsche Bank
- DZ Bank AG
- Pareto Securities AS
- Exane BNP Paribas
- Independent Research
- J.P. Morgan Cazenove
- Kepler Cheuvreux
- LBBW
- M.M. Warburg
- MainFirst Bank AG
- Morningstar
- Nord/LB
- Scotia Capital
- Société Générale
- Solventis
- UBS
The K+S ADR Program offers North American investors the opportunity to take stock in K+S. Since the ADRs are quoted in US dollars and dividends are also distributed in US dollars, this financial instrument closely resembles an American share. Two ADRs represent one K+S ordinary share. The K+S ADRs are traded in the United States under a level 1 ADR Program in the over-the-counter market (OTC).

**Trade on OTCQX**
- Symbol: KPLUY
- CUSIP: 48265W108
- Ratio: 2 ADRs = 1 Share
- Country: Germany
- ISIN: DE000KSAG888
- Depositary: The Bank of New York Mellon

**Benefits to North American investors**
- Clear and settle according to normal U.S. standards
- Stock quotes and dividend payments in U.S. dollars
- Can be purchased/sold in the same way as other U.S. stocks via a U.S. broker
- Cost-effective means of international portfolio diversification

Further information:
[www.kpluss.com/adr](http://www.kpluss.com/adr)
### K+S bonds and issuer rating

<table>
<thead>
<tr>
<th></th>
<th>Bond 12/2021</th>
<th>Bond 06/2022</th>
<th>Bond 04/2023</th>
<th>Bond 07/2024</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WKN</strong></td>
<td>A1Y CR5</td>
<td>A1P GZ8</td>
<td>A2E 4U9</td>
<td>A2N BE7</td>
</tr>
<tr>
<td><strong>ISIN</strong></td>
<td>XS0997941355</td>
<td>DE000A1PGZ82</td>
<td>XS1591416679</td>
<td>XS1854830889</td>
</tr>
<tr>
<td>Listing</td>
<td>Luxembourg SE</td>
<td>Luxembourg SE</td>
<td>Luxembourg SE</td>
<td>Luxembourg SE</td>
</tr>
<tr>
<td><strong>Issue volume</strong></td>
<td>EUR 500 million</td>
<td>EUR 500 million</td>
<td>EUR 625 million</td>
<td>EUR 600 million</td>
</tr>
<tr>
<td><strong>Outstanding volume</strong></td>
<td>EUR 441.421 million</td>
<td>EUR 207.100 million</td>
<td>EUR 443.398 million</td>
<td>EUR 484.700 million</td>
</tr>
<tr>
<td><strong>Issue price</strong></td>
<td>99.539%</td>
<td>99.422%</td>
<td>100.982%</td>
<td>100.000%</td>
</tr>
<tr>
<td><strong>Coupon payment</strong></td>
<td>4.125%</td>
<td>3.000%</td>
<td>2.625%</td>
<td>3.25%</td>
</tr>
<tr>
<td><strong>Maturity</strong></td>
<td>06.12.2021</td>
<td>20.06.2022</td>
<td>06.04.2023</td>
<td>18.07.2024</td>
</tr>
<tr>
<td><strong>Face value</strong></td>
<td>1,000 EUR</td>
<td>100,000 EUR</td>
<td>1,000 EUR</td>
<td>100,000 EUR</td>
</tr>
</tbody>
</table>

**Issuer rating (S&P):** B+ (outlook: stable), September 2021
Additional information

Financial calendar 2021/2022

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021 Annual Report</td>
<td>March 10, 2022</td>
</tr>
<tr>
<td>Quarterly Report; 31 March 2022</td>
<td>May 11, 2022</td>
</tr>
<tr>
<td>Annual Shareholders’ Meeting</td>
<td>May 12, 2022</td>
</tr>
<tr>
<td>Dividend payment</td>
<td>May 17, 2022</td>
</tr>
<tr>
<td>Half-yearly Financial Report, 30 June 2022</td>
<td>August 11, 2022</td>
</tr>
<tr>
<td>Quarterly Report; 30 September 2022</td>
<td>November 10, 2022</td>
</tr>
</tbody>
</table>

More content available online

- K+S Website: [www.kpluss.com](http://www.kpluss.com)
- Newsletter subscription: [www.kpluss.com/newsletter](http://www.kpluss.com/newsletter)
- Social Media: [LinkedIn](http://www.linkedin.com), [X (Twitter)](http://www.twitter.com), [YouTube](http://www.youtube.com), [Medium](http://www.medium.com), [Instagram](http://www.instagram.com)
Disclaimer

No reliance may be placed for any purpose whatsoever on the information or opinions contained in the Presentation or on its completeness, accuracy of fairness. No representation or warranty, express or implied, is made or given by or on behalf of the Company or any of its respective directors, officers, employees, agents or advisers as to the accuracy, completeness or fairness of the information or opinions contained in the Presentation and no responsibility or liability is accepted by any of them for any such information or opinions. In particular, no representation or warranty, express or implied, is given as to the achievement or reasonableness of, and no reliance should be placed on any projections, targets, ambitions, estimates or forecasts contained in this Presentation and nothing in this Presentation is or should be relied on as a promise or representation as to the future.

This Presentation contains facts and forecasts that relate to the future development of the K+S Group and its companies. The forecasts are estimates that we have made on the basis of all the information available to us at this moment in time. Should the assumptions underlying these forecasts prove not to be correct or should certain risks – such as those referred to in the Annual Report – materialize, actual developments and events may deviate from current expectations. Given these risks, uncertainties and other factors, recipients of this document are cautioned not to place undue reliance on these forecasts.

This Presentation is subject to change. In particular, certain financial results presented herein are unaudited, and may still be undergoing review by the Company’s accountants. The Company may not notify you of changes and disclaims any obligation to update or revise any statements, in particular forward-looking statements, to reflect future events or developments, save for the making of such disclosures as are required by the provisions of statute. Thus statements contained in this Presentation should not be unduly relied upon and past events or performance should not be taken as a guarantee or indication of future events or performance.

This Presentation has been prepared for information purposes only. It does not constitute an offer, an invitation or a recommendation to purchase or sell securities issued by K+S Aktiengesellschaft or any company of the K+S Group in any jurisdiction.